

AIR CONDITIONING & REFRIGERATION

The Newspaper of the Industry

Subscription Price, \$6 Per Year

Vol. 79, No. 14, Serial No. 1,446

December 3, 1956

NEWS

Issued every Monday at
450 West Fort St., Detroit 26, Michigan
Established 1926

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Inside Dope

By GEORGE
F. TAUBENECK



Learn to live and laugh —
thus delay your epitaph

Stories of the Week

Down Goes Copper,
Up Goes Tubing
Unique Tribute
New Use for Freezers—1984
Needling Question
Awaken Mommy
Out of Our Mailbag
Everybody Got Problems

Stories of the Week

"You must play a lot of golf,"
a Democrat committeewoman
braced Adlai Stevenson. "You
have such a wonderful tan."

"No, madame, I obtained this
tan making outdoor speeches in
Florida and California."

"Then," she snapped, "you
talked too long."

"Never a day's illness in my
life, and all due to simple living,"
this fella bragged.

"From the ages of 20 to 50 I
lived an absolutely regular life
—no women, no liquor, no late
hours. Every day I was in bed
regularly at nine and up at five
in the morning. I worked from
eight to noon, then had lunch—
a plain lunch, mark my word.
After that an hour's exercise,
then. . . ."

"Excuse me, sir," interrupted
a stranger. "What were you in
prison for?"

Traffic careened around them
crazily as two boys waited for a
crossing break at a street
corner.

"What do you want to be,"
postulated one to the other, "If
you grow up?"

According to the Rev. James
Francis Jones of Toledo, a sure-
fire way of boosting church at-
tendance is to announce a ser-
mon entitled:

"Sins of Your Neighbors."
or. . . .

"How To Save Your Friends
from Eternal Damnation."

Down Goes Copper, Up Goes Tubing

Steel and aluminum tubing
manufacturers are dejected at
the moment, because a stroke of
good luck for the air condition-
ing industry was bad luck for
them. Here's the story:

All production-runs of pack-
aged air conditioners employ
copper tubing. Many are the
reasons—malleability, corrosion
resistance, longevity (Bro. Dum-
ser, you take it from there).

Coveting this lush market,
steel tubing producers and the
aluminum people have spent a
lot of time and effort on field
tests of their products in air
(Concluded on Page 8, Col. 1)

Westinghouse Distributors Set Room Unit Prices

EAST SPRINGFIELD, Mass.—Westinghouse distributors will set suggested list prices for the company's room air conditioners in the respective distributor markets.

This was announced by H. F. Hildreth, manager of the Westinghouse refrigeration specialties division which produces the company's room air conditioners here.

"This move will enable Westinghouse dealers to be competitive in every market with suggested list prices established by the local distributor in line with major competition," Hildreth explained.

"The factory will issue a dis-
(Concluded on Page 29, Col. 5)

Buy-Back Plan To Protect Dealers

EAST SPRINGFIELD, Mass.—Westinghouse Electric Corp. has announced "a unique plan designed to level some of the production 'peaks and valleys' of room air conditioners."

The company through its distributors will buy back from dealers on July 15, 1957, a number of room air conditioners equal to the number each dealer had purchased and accepted in the period January through May, 1957. The purpose of the program is to encourage non-seasonal buying, and thus
(Concluded on Page 29, Col. 3)

Sutton To Make Auto Conditioner For Ford Cars

WICHITA, Kan.—O. A. Sutton Corp. announced it will build a new, lower-cost auto air conditioning unit for Ford Div., Ford Motor Co.

Only two weeks ago Sutton let it be known it was entering the auto air conditioning field for the first time (as reported in the Nov. 19 issue of the News). Deliveries to distributors and sales branches will begin in late January, the company announced.

Sutton's "Hang-On" Vornado
(Concluded on Back Page, Col. 1)

ARF Asks U. S. To Cut Appliance Excise Tax

WASHINGTON, D. C.—A request by the American Retail Federation that the Federal manufacturers' excise tax on appliances, radios, TV sets, phonographs, and records be eliminated or reduced was placed before a House Ways and Means subcommittee as it began two weeks of public hearings on proposals for excise changes.
(Concluded on Back Page, Col. 2)

Take a Giant Step

("Conscience of the Industry" Editorial
By George F. Taubeneck)

"Discussing mergers," memos a top sales executive of our industry (who for obvious reasons wants to remain anonymous) "in a recent editorial AIR CONDITIONING & REFRIGERATION NEWS declared that the trend toward 'combines' could harm individual dealers, if the latter aren't willing to cooperate fully with the merged manufacturing corporations.

"One prime reason for these 'combines' is to provide a single full line for dealers. Either the latter will have to take that full line, forsaking all others, or quite a few of those dealers will be replaced eventually. The situation is that tough for certain dealers and contractors.

"That cooperation would be to their financial advantage is as obvious as the nose on Jimmy Durante's face.

"A really smart dealer would look around for a merger himself. Say, for example, a well-heeled appliance dealer merged with a substantial air conditioning and commercial refrigeration franchise, and then bought up a going concern in the heating and plumbing business. Such a merged outfit would be all set for the dazzling home-equipping markets which will materialize in the next dozen years.

"I realize that my suggestion is radical and that damn few little dictators will appreciate it, but it makes a lot of sense."

The NEWS shares his view that the proposition is radical, and suspects that at first glance it will seem abhorrent to most dealers and contractors, whatever their prime business interest is as of now. Furthermore, we submit that the independent small businessman is here to stay, thank goodness.

Nevertheless, this possibly revolutionary idea for the Future DOES make sense, don't you think?

(Concluded on Page 14)

BEHIND PAGE ONE . . .

Wooden Shipping Crates

Room Unit Manufacturer Realizes Savings
In Time, Money, With New Container..... 5

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First Western Air Conditioning, Refrigeration, Heating Show May 3-7

LOS ANGELES—The first Western Air Conditioning, Heating, Ventilating & Refrigeration Conference and Exhibit has been scheduled for May 3-7, 1957, according to Arthur J. Hess, chairman of the show's Executive Committee, and regional chairman of the American Society of Heating & Air-Conditioning Engineers.

This regional exhibit program will be held simultaneously with the regional conference of the ASHAE. Other engineer-

ing societies and contractors' groups are expected to participate in the technical sessions.

"A regional show of this type is long overdue and is bound to give an immense stimulus to all branches of the air conditioning, heating, ventilating, refrigeration, and allied industries in that area, the fast-growing market for such products and services in the United States," said Hess.

Attendance for three of the
(Concluded on Page 29, Col. 1)

Compressor Shipments Up 37% In 8 Mos.

ARI Says 3,511,418 Units
Shipped Tops '55 Period;
336,737 Moved In August

WASHINGTON, D. C.—Manufacturers' shipments of compressor bodies used in air conditioning and refrigeration units were up almost 37% during the first eight months of 1956, as compared with the same period of 1955, it is reported by Geo. S. Jones, Jr., managing director of the Air-Conditioning & Refrigeration Institute.

The figures, which do not include compressors used in household refrigerators, were compiled from reports made to ARI by manufacturers whose output is estimated to represent in excess of 90% of the industry, he said.

Actual shipments for the eight-month period totaled 3,511,418 units, compared with 2,566,581 units in the first half of 1955. August shipments this year were 336,737 units, against 227,279 in August 1955. These totals do not include compressors designed for use with ammonia refrigerants.

Of the eight-month total for 1956, 205,710 of the compressor bodies shipped were of the type used in automotive air condi-
(Concluded on Back Page, Col. 1)

Emerson Electric Names Childers, Handlan

ST. LOUIS—Promotion of George H. Childers to merchandise sales manager and Edward K. Handlan to manager of air conditioning sales has been announced by Emerson Electric Mfg. Co. here.

In his new position, Childers will head the company's reorganized Merchandise Sales Dept. and have over-all responsibility for the sale of commercial fans, industrial fans, and air conditioners.

Handlan, former administra-
(Concluded on Page 29, Col. 2)

Borg-Warner Purchases Some Flakice Patents

BROOKLYN—Borg-Warner Corp. and Flakice Corp. announce that Borg-Warner has purchased certain patents from Flakice Corp. under which Borg-Warner's York Div. has been manufacturing ice makers for the production of cubes and other forms of shaped ice.

Flakice Corp. retains certain other patents and all its trademarks.

Each corporation will, therefore, in the future, manufacture and sell its own lines of ice making equipment independently of the other, according to the announcement.

11 Servicemen Will Care for All G-E TV, Appliances In Toledo Service Center

Trane To Expand Field Sales Force In Package Unit Emphasis

TOLEDO — General Electric Co. assumed the responsibility for the servicing of its appliances and television receivers in the Toledo area with the formal opening of its new factory service center at 1225 E. Manhattan Blvd.

Manager of the new facility is H. E. Stokes, who has been with G-E 21 years, serving most of that time as factory product service engineer in Louisville.

J. R. Davis is manager of the company's consumer service project that also includes the Fort Wayne area as a branch of the Toledo operation.

The Toledo staff will include 11 factory-trained field servicemen, most of them with more than 10 years' G-E experience.

Arthur S. Carroll is directing

the Fort Wayne operation, located at 1720 S. Harrison St. The Fort Wayne staff includes six field servicemen.

Davis said it is hoped that 90% of all TV service and close to 100% of all appliance service will be in the home. Company trucks will be equipped with 1,200 parts.

Last summer, G-E announced that it planned to test factory service in the two cities and also in Columbus, Ohio.

Declares Dividend

SCHILLER PARK, Ill.—Directors of Controls Co. of America declared a quarterly dividend of 18¾ cents a share on the company's common stock, payable Jan. 2, 1957, to stockholders of record at the close of business Dec. 14, 1956.

LA CROSSE, Wis.—The Trane Co. plans to greatly expand its field sales force, reports Thomas Hancock, executive vice president.

"We are making this expansion in view of our announced intention of placing greater emphasis on our packaged air conditioning lines," Hancock said.

He said that Trane plans to add sales personnel experienced in package equipment selling to many of its 92 sales office staffs.

These salesmen will specialize in handling Trane's expanding package unit line and will work directly with dealer accounts in the office area to which they are assigned, Hancock said.

One of their first duties will be to help establish dealer ac-

counts to handle the package units.

"We at Trane are enthusiastic over the growth potential in the package field," noted Hancock, "and realize that an increase in our sales force is necessary if we are to achieve successful market penetration."

Trane plans to back up the new salesmen and distributors with a complete merchandising and sales promotional program, placing increased emphasis on advertising at both the trade and consumer levels.

To Cool Dormitories

ARCADELPHIA, Ark.—Pfeiffer Plumbing & Heating Co., Little Rock, has the job of air conditioning the dormitories of Ouachita Baptists college here. Cost is estimated at \$15,000.

J. H. Smith of Wolverine Named Special Commerce Unit Copper Div. Chief

WASHINGTON, D. C.—Appointment of Jack Howard Smith of Detroit as director of the Copper Div., Business & Defense Services Administration, U. S. Dept. of Commerce, was announced by BDSA Administrator Horace B. McCoy.

Smith is east central district sales manager of the Wolverine Tube Div. of Calumet & Hecla, Inc.

The announcement said Smith brings to the agency current expert knowledge of the copper industry, with which he has been associated during his entire business career. He will serve without compensation from the Government for a period of six months, during which he will receive training which will qualify him to serve in any future emergency.

He graduated from the Detroit Institute of Technology with a B.S. degree. He attended the Naval Communications School at Harvard university in 1944 and the American Management Association School, New York City, in 1955.

Smith served in the South Pacific while on duty with the U. S. Navy from 1944 to 1946 as a lieutenant (J.G.). Joining Wolverine Tube in 1940, he served in various capacities at its Detroit plant and subsequently became office sales representative, and served in various districts until being appointed east central district sales manager.

He is a member of the Detroit Sales Executive Club, American Society of Refrigerating Engineers, and the American Management Association.

As director of the Copper Div., he succeeds Stuart E. Yeaton who has returned to his position of general product manager of the Electrical Wire Div. of John A. Roebling's Sons Corp., Trenton, N. J.

Minneapolis-Honeywell Buys Recording Systems Mfg. Firm

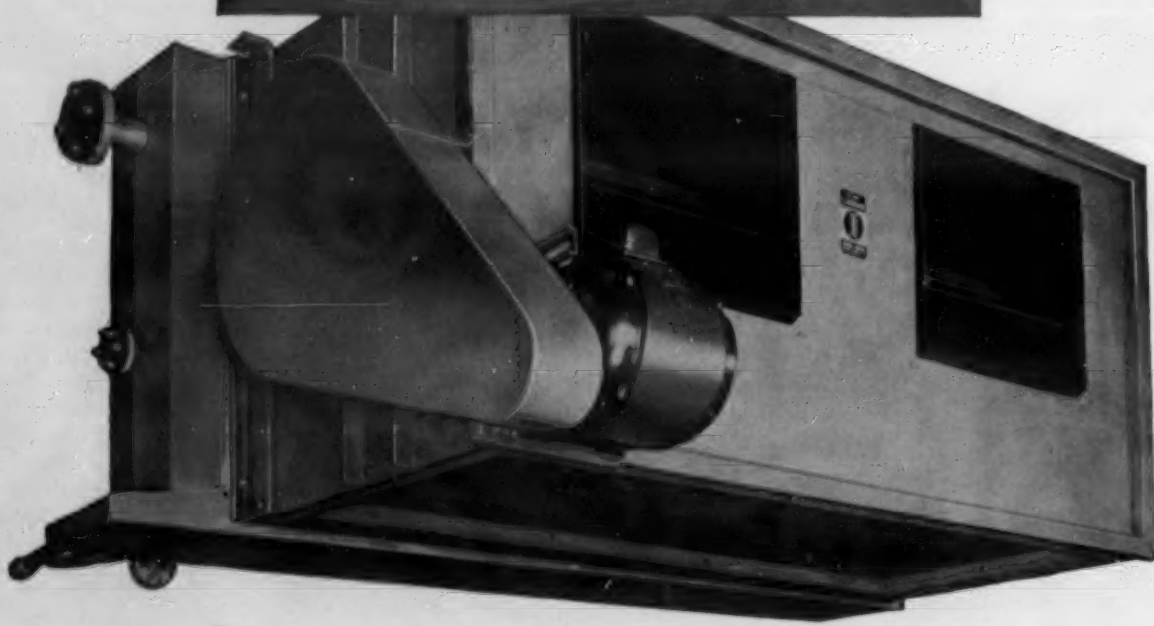
MINNEAPOLIS — Minneapolis-Honeywell Regulator Co. has purchased Davies Laboratories, Inc. of Beltsville, Md., manufacturer of specialized high-speed data recording systems, Paul B. Wishart, president, announced.

Wishart said activities of the Davies Laboratories would be integrated with those of Honeywell's Industrial Div.

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The only completely automatic system for freezing temperatures offering these extra large capacities. THERMOBANK requires no manual attention whatsoever.

Ceiling mounted, THERMOBANK takes no

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Can be used as an independent system or with an existing large system without affecting the operation of other evaporators.

WRITE FOR BULLETIN 294-6

KRAMER TRENTON CO. • Trenton 5, N.J.

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EASY TO INSTALL • ECONOMICAL



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Left to right: Don Wood, General Sales Manager—John Morrill, General Manager—Clyde Ploeger, Director of Engineering.

WE WANT YOUR COMPRESSOR BUSINESS!

Our name is Evansville Division of Bendix-Westinghouse Automotive Air Brake Company. We're a new name in the manufacture of refrigeration and air-conditioning compressors, but in manufacturing other types of compressors we've been a leader for many years.

We want your business and feel we're well qualified to handle it. Our product consists of a complete line of hermetic compressors and condensing units ranging in capacity from $\frac{1}{4}$ to $7\frac{1}{2}$ H. P. They're designed for low- and high-temperature applications and offer

several new exclusive features which have already resulted in substantial orders from some of the most respected names in the industry.

Our manufacturing facilities located here in Evansville, Indiana, are big, modern, well-staffed and well-tooled. We can handle any size order you can give us.

Our personnel know this business from over 33 years' manufacturing history in this field and are dedicated to carry out our main policy . . . to provide you with the finest products and best service available.

We hope to get acquainted with you soon.

NOT IN APPLIANCE BUSINESS

Neither this division nor the parent company—Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio—has any connection with appliance manufacturing. Bendix-Westinghouse is a joint subsidiary of Bendix Aviation Corporation, Detroit, Michigan, and Westinghouse Air Brake Company, Wilmerding, Pennsylvania. EVANSVILLE DIVISION, EVANSVILLE 11, INDIANA.

EVANSVILLE DIVISION of

Bendix-Westinghouse

Automotive Air Brake Company

For more information about products advertised on this page use Information Center, page 22.

ASHAE Unit Finds Home Refrigeration, Heating by Nuclear Energy Unsound

NEW YORK CITY—All current evidence indicates that it may be feasible to use nuclear reactors in large-size applications to provide central heating or heat-operated refrigeration for entire communities or groups of large buildings, but such use for home heating is technically and economically unsound. That is one of the observations of the Nuclear Energy Engineering Committee of the American Society of Heating & Air-Conditioning Engineers. The

2,500 Engineers To Review Plastics Progress at SPE Technical Meeting In St. Louis Jan. 16-18; Papers Due

GREENWICH, Conn.—More than 2,500 plastics engineers will be on hand for a review of 15 years of plastics progress, at the 13th annual technical conference of the Society of Plastics Engineers, to be held in St. Louis at the Sheraton-Jefferson hotel Jan. 16-18. Leading authorities will deliver over 60 new technical papers on all phases of the industry's technological problems at the 17 sessions.

Hotel facilities for immediate registration are still available. Arrangements for attending the conference may be made through Registration Chairman Harold Holz, 122 N. Kirkwood Rd., St. Louis 22, Mo. Registration fee for SPE members is \$10; for non-members \$15; and for ladies (special program) \$5.

Committee has been studying developments in the nuclear energy field.

It is explained by the committee that the fusion or thermonuclear process for combining atoms has so far been utilized only in the H-bomb.

In the foreseeable future only the fission process, making use of a nuclear reactor, offers controllable release of atomic energy at usable temperature levels, the group says. The nuclear fission reactor is a "furnace" which burns as fuel one of the radioactive elements.

It seems likely, according to the committee, that in a few years package reactors will become economical for power generation in those parts of the world where other fuels are scarce. As costs come down atomic energy may eventually compete with conventional fuels in this country.

However, when used to gen-

erate heat or power the economic usefulness of atomic energy must be judged along with other fuels on an investment, operation, and maintenance basis.

The design and construction features required to assure safety of nuclear furnaces add greatly to their cost, it is pointed out by the committee. Radiation shielding is bulky. Spent fuel must be replaced by remote handling techniques. Control equipment is complicated. Precautions to safeguard operating personnel are expensive.

Although no efficient conversion mechanism has yet been devised, the committee statement concludes it may be possible within this lifetime to convert a large proportion of the energy from nuclear reactors into electricity or other high level forms of energy.

The observations of this com-

mittee were prepared by Walter A. Grant, vice president, Carrier Corp. The chairman of the committee is Ralph A. Sherman, assistant director, Battelle Memorial Institute, Columbus, Ohio.

Other committeemen are L. N. Hunter, vice president, National-U. S. Radiator Corp.; Walter F. Friend, mechanical engineer, Ebasco Services, Inc., New York; and Burgess H. Jennings, professor and chairman, department of mechanical engineering, Northwestern university.

N. J. Ruling Hits Milk Vending Machine Bans

CLIFFSIDE PARK, N. J.—A superior court ruling has held that ordinances limiting just milk vending machines are illegal, so this borough can't legislate against the vendors, it was reported here.

Asked to look into the possibility of a milk vending machine ordinance by Borough Council, Borough Attorney Edward A. Smarak said that due to the court ruling the only way this can be effected is with an ordinance prohibiting all coin vending machines. Milk machines are already banned in business and residential zones by the borough's zoning ordinance.

Milk vending machines also "got into the act" in East Rutherford, N. J. when the Borough Council there defended its licensing arrangement after Howard Strong termed the \$100 license requirement discriminatory and questioned the constitutionality of the ordinance.

One councilman stated the ordinance "was a health measure" and that vending machine owners "did not maintain sanitary standards."

The Passaic-Clifton, N. J. *Herald News*, in an editorial commenting on a judge's declaration that the anti-milk vending machine ordinance of Garfield, N. J. is illegal and discriminatory, found this action "encouraging."

Southern Calif. RACCA Nearing Approval of Standard Warranty

LOS ANGELES—Some further revisions were asked for by members when the proposed uniform Standard Warranty and Guaranty, and the proposed uniform Service Contract, came up for review at the November board of directors' meeting of Refrigeration and Air Conditioning Contractors' Association of Southern California.

D. L. Kissell of Kissell Refrigeration Corp., president of RACCASC, said the requested revisions were not too extensive and it is believed the two documents will be ready for further consideration and possible acceptance at coming meetings.

Henry O. Steinhurst Dies

UTICA, N. Y.—Funeral services were conducted Nov. 29 at the Rockwell Keilbach Funeral Home for Henry O. Steinhurst, president of Emil Steinhurst & Sons, Inc., who died Nov. 26.



QUICK AND ACCURATE leak checks of equipment can be made on the assembly line as well as at customer's installation.

GENERAL ELECTRIC'S PORTABLE LEAK DETECTOR HELPS CONTRACTORS . . .

Make Jobs Leak-Tight; Cut Service Costs

Service repair reductions of 85% have recently been reported by a G-E Leak Detector user in Michigan who installs air conditioning equipment. Similar savings of time and labor can be yours when you use General Electric's Leak Detector to assure your customers a leak-tight initial installation of reciprocating, rotary or centrifugal compressors; household, commercial or industrial refrigeration systems. And you can handle service calls faster and more effectively during the busy summer months by using this simple instrument to "sniff out" troublesome leaks in installations which you service.

Existing light has no effect on the efficiency of your inspection procedure with the General Electric Type H-1 Leak Detector and even unskilled operators can find leaks so small that in 100 years, only one ounce of Freon® gas would escape.

A true leak signal is assured because the Type H-1 detector automatically offsets slow changes in background concentrations of halogen gases. Only a true leak of halogen gas causes a response. Leaks are indicated by an instrument dial as well as by a variable-pitch loudspeaker or earphones.

Readily portable, the unit weighs only 24½ pounds. It is well suited to use in your shop as well as for service testing in the field wherever alternating current is available.

For more information, call your G-E Apparatus Sales Office or write for bulletin GEC-233 to Section 585-55, General Electric Co., Schenectady 5, N.Y. *Registered trade-mark of Kinetic Chemicals Division of E. I. duPont de Nemours & Co., Inc.

Progress Is Our Most Important Product

GENERAL ELECTRIC

Material, Manpower Savings Seen by Room Unit Wooden Shipping Crate Use

CHICAGO—Savings in both material costs and manpower are being realized by Mitchell Mfg. Div., Cory Corp., through the use of an all-wooden crate that has replaced a carton container on Mitchell's room air conditioner assembly line, states Stanley Rhein, manager of assembly operations.

The new shipping crate, a product of Chicago Mill & Lumber Co., is all plywood with wooden strips at cleats at major stress points, to provide added strength.

Crates are designed in a pallet fashion which enables fork lift trucks to move units more readily. Also, this feature is said to result in less damage to the units from the material handling equipment. Rhein says

that room air conditioner units in these shipping crates can be stacked 20 high without fear of damage.

Cost of the new crate is said to be about half of the cost of the former carton. The new crate and its assembling operation has replaced the equivalent of 4½ workers—two on the line itself and the full time of two men and half time of another who worked to assemble

the shipping container.

With the new crating operation, no banding is required. The crate is secured by air operated stapling guns that must use staples 1¼ in. to 1½ in.

Rhein said that the crate comes from the Chicago Mill & Lumber factory in Arkansas stenciled and constructed in such a way that all that is needed to be done at the Mitchell plant is to make a few simple folds. Rhein predicts that with the new crate there will be less return of units damaged in shipping, and that warehousing should be less of a problem.



ASSEMBLING cleated plywood containers for air conditioners at Mitchell Mfg. Co., Div. of Cory Corp.

(finish photo)

Judge OKs Reorganizing Nelson Under Chapter 10; E. H. Stein Named Trustee

ST. LOUIS—The petition of three creditors of N. O. Nelson Co. to reorganize the firm under Chapter 10 of the Bankruptcy Act was approved recently by Federal Judge Roy W. Harper.

He appointed Elliot H. Stein, who has been serving as receiver under Chapter 11 proceedings, as trustee under \$50,000 bond.

Petitioning creditors are Cardinal Machine & Nipple Works, Inc., American Foundry & Mfg. Co., and Midwest Machinery Co.

Nelson is a wholesaler of refrigeration, air conditioning, heating, and plumbing supplies.

The court authorized the trustee to operate the business until further order of the court. Judge Harper ordered the trustee to file with the court not later than the 25th of each month a report of operations of the concern.

Trustee was authorized to employ these officers with indicated salaries: George W. Hoffmann, vice president, \$1,500 a month; W. M. McKinney, vice president, \$1,250 monthly; and William Charles, general manager, \$1,000.

Judge Harper ordered the trustee to file a list of creditors and amounts of their claims and list of stockholders. He set Dec. 17 at 10 a.m. for hearing to retain Stein as trustee.

By May 15, the court ordered, trustee must file his plan of reorganization or report his reasons why a plan cannot be effected. Hearing on the plan or report was scheduled for June 25 at 10 a.m.

Johnson Sets Branches At Fort Worth, Savannah

MILWAUKEE — Johnson Service Co., manufacturer of automatic temperature control systems, has established new branch offices at Fort Worth, Texas and Savannah, Ga.

James R. Gaylor, formerly of the Atlanta branch, is in charge of the Savannah office. R. C. Spangenberg is in the charge of the Fort Worth branch. He was formerly with Johnson's Dallas office.



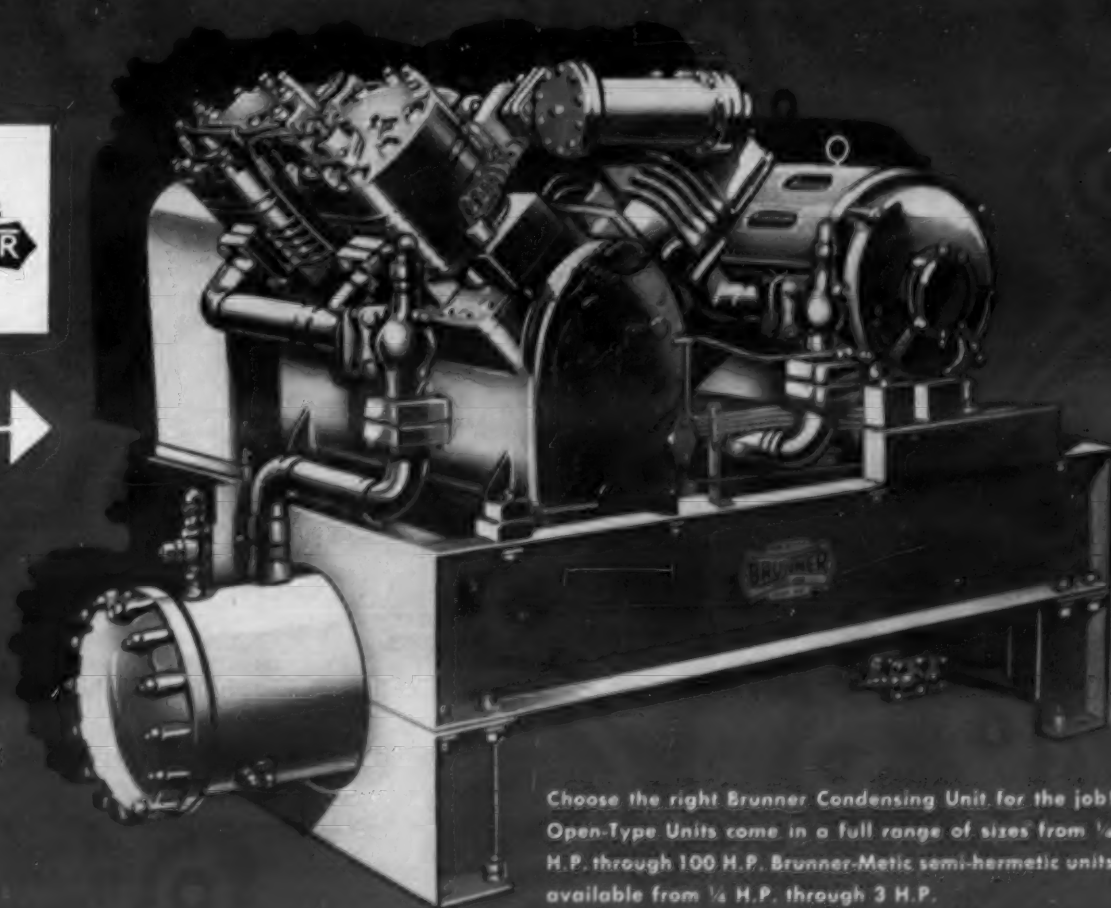
1906

Top engineering of the times! The horse-drawn fire engine brought thrills to young and old alike in 1906... the year when the first Brunner-engineered product became available.

TODAY

Wherever refrigeration is needed, there's a
BRUNNER-ENGINEERED Condensing Unit
that's just right for the job.

BRUNNER MANUFACTURING COMPANY, UTICA, N. Y.
THE BRUNNER CO., GAINESVILLE, GA.
IN CANADA: BRUNNER CORP. (CANADA) LTD., TORONTO, ONTARIO



Choose the right Brunner Condensing Unit for the job! Open-Type Units come in a full range of sizes from ¼ H.P. through 100 H.P. Brunner-Metic semi-hermetic units available from ¼ H.P. through 3 H.P.

Air Conditioning Aids Heart Patients

Tests Show Heat, Humidity Ups Heart Action, Muscle Tension, Output per Beat; Patients Rest Better In Cool Atmosphere

CINCINNATI—Air conditioning can be of help in aiding the recovery and preventing serious complications of those with heart disease, and can also play a role in preventing the onset of heart disease, it was indicated in a discussion presented before the American Heart Association meeting here last month.

Discussion on the subject was presented by Drs. George E. Burch and Albert Hyman, two New Orleans physicians who have conducted a number of experiments to determine the effect of hot and humid environment on heart action.

It was Dr. Burch who reported in one of the medical journals that a hospitalized patient with a form of heart disease might as well be asked to "run around the hospital" as live through a hot, humid day without air conditioning.

Measure Changes In Blood Volume Pumped

Drs. Burch and Hyman told the Heart Association about an experiment in which they measured changes in the volume of blood pumped by the heart, in tension on the walls of the heart muscle, and in other factors related to heart work, occurring in seven individuals when a comfortable atmosphere was changed to a hot and humid one. Three of the subjects did not have cardiovascular disease and served as "controls"; four were patients with mild to moderate chronic congestive heart failure.

The tests were begun on all subjects some three hours after breakfast while they rested in a comfortable bed. A first set of measurements relating to heart work was taken in a room atmosphere of 73° F., with a 60% relative humidity. The room atmosphere was then gradually changed to 111° F. and 86% relative humidity, and the measurements recorded again.

Ample Evidence of Heat, Humidity Effect

All subjects were repeatedly examined during the experiment and a careful watch kept so that it might be terminated immediately if unfavorable reactions set in. (In earlier experiments, reactions were so marked in some subjects that observations had to be discontinued—ample evidence of the effect of heat

and humidity upon these heart cases).

In every subject, Drs. Burch and Hyman found, the volume of blood pumped by the heart and the output per beat increased upon exposure to the hot and humid atmosphere. Actually, the increases in heart work were greater in the healthy subjects, because their hearts had greater capacity to meet the strain of heat and humidity, while the persons with heart disease adjusted as best they could.

Discussing their findings, Drs. Burch and Hyman pointed out that a person "lying supine in a bed can increase his cardiac work without exercise and with-

out movement" if atmospheric conditions change. "Relatively mild exercise in a hot and humid environment would be expected, from these studies, to produce more cardiac work than strenuous exercise in a cool and dry environment."

In an earlier article in one of the medical journals, Dr. Burch postulated that since heat and humidity may demand the shifting of blood to the skin, even at the expense of kidney and brain, some cases of cerebral accident, resulting in death, might possibly be attributed to this mechanism.

"This shift apparently occurs even if it results in death of the organism," it was stated. "It is

possible that the hemorrhages in the brain resulting from a hot and humid environment are due to cerebral anoxia associated with the shifting of blood away from the brain."

Here are some of the conclusions drawn by Dr. Burch from his studies on the effects of hot and humid environments, and published in medical journals:

"... It would appear from these studies and associated clinical experience, as well as from the studies of others, that a cool environment should be made available not only to patients in a debilitated state, such as from cerebrovascular accidents, chronic infection, malnutrition, senility, and the like, but also to patients whose illness would require relaxation and avoidance of stress on the body physiologic mechanisms.

"Patients, as well as normal man, seem to rest better men-

tally and physically in a comfortably cool atmosphere."

"... There is a definite need to consider the hot and humid environment produced by climate, industrial working conditions, or overcrowding of the sickroom in the treatment of all patients in whom it is desired to reduce cardiac work.

Use of Conditioning Helps Cut Heart Work

"Greater use of air conditioning in hospitals, cardiac wards, offices, and homes will assist toward this end. Many important problems concerning the influence of the hot and humid environment upon man remain unsolved and should be studied."

"... It was possible to maintain essentially a normal physiologic state, including the cardiovascular system, at an even higher environmental temperature.

(Concluded on next page)

1957 WESTINGHOUSE MASTER-MATCHED



Thurman L. Rundlett, chief engineer of the Westinghouse Air Conditioning Division checks sound and noise energy readings of a new Westinghouse "Match-Master" Air Conditioner on a standard sound level meter.

1 SOUND METER TESTS PROVE IT

Here's proof you can see! New 1957 Westinghouse Master-Matched Air Conditioners are quiet... as quiet as any in the industry.

Standard sound level tests like this one plus oscillograph traces and electronic computer

studies were used by Westinghouse research engineers to analyse sources of noise in air conditioners. These sources were tracked down and removed. Result? An air conditioning line as quiet as any you can sell.

2 YOUR OWN EAR TELLS THE STORY

Just listen while a Westinghouse unit operates! It's so quiet you won't even know it's there. This means you can be positive that you're

selling a "good neighbor" air conditioner... one that will always do its job quietly, efficiently.

Here's how Westinghouse engineers did this job!

- they "detuned" the gas chambers in the famous Westinghouse Compressor.
- they installed a 200% more effective muffler to completely deaden compressor sound.
- they engineered out the most objectionable noise frequencies, and...
- they dissipated the remainder of the noise inside an acoustic chamber, eliminating

sound from the air stream. But that's not all! New 1957 Westinghouse Master-Matched air conditioners deliver up to 10% MORE COOLING PER WATT OF ELECTRICAL POWER than most other makes. So for economy... efficiency... quietness... you sell the leader when you sell Westinghouse!

SUPER-FLO
FILTER-DRIER

UP TO 5 TONS

NO PRESSURE DROP

MOLDED REMCAL DRYING FIBERGLAS DEPTH FILTERING

Check Super-Flo's amazing low price, for both original equipment and replacement, against ordinary driers which do not have Super-Flo molded drying elements, massive fiberglass depth filters and spun-end copper shells. Available to the trade through wholesalers everywhere.

REMCO INCORPORATED
ZELIENOPLE, PA.

Cooling Helps Heart Patients--

(Concluded from preceding page) fall in the respiratory tract of 120° F. and 95% relative humidity, by having the subject sit in a water-cooled chair in which the upper half of the thighs and the pelvic and abdominal regions were enclosed in the cool air of the chair.

"Only about 50% of the body was exposed to the hot and humid atmosphere from which heat was actually collected, but the areas in the water-cooled chair were able to lose the absorbed heat, as well as the heat generated by metabolic processes, by radiation and conduction without the necessity for sweating.

"Therefore, if it is possible to lose heat readily, then the cardiovascular system may function 'restfully.'

"... There is literally a rain-

fall in the respiratory tract when hot and humid air is breathed. Whereas approximately 10% of body heat is lost through the respiratory tract of man when he is breathing comfortable environmental air, not only is this heat loss eliminated when the atmosphere is hot and humid, but heat may actually be gained from the atmosphere by way of the air breathed, which, in turn, throws an additional load for elimination of heat upon the cardiovascular system.

"A comfortably cool atmosphere, on the other hand, makes certain that the respiratory tract not only does not hamper heat elimination but, as a medium of heat loss, is actually an asset in thermal regulation."

"... It was noticed several years ago that acute left ven-

tricular failure developed in several patients with mild chronic congestive heart failure and under the influence of therapy, when they were placed in a hot and humid atmosphere. It was suggested by indirect data that the failure was most probably precipitated by the increase in cardiac work imposed by the environment.

"Experiments were repeated again to observe further the influence of a hot and humid environment upon the cardiovascular state clinically. In a patient with mild chronic congestive heart failure, clinical manifestations of acute left ventricular failure developed rather quickly and, in fact, the experiment had to be interrupted because of the exacerbation in failure. This patient manifested orthopnea, Cheynes-Stokes respiration, gallop rhythm, and extreme apprehension."

2 Water Chilling Units Air Condition Electronic 'Brain' Parts, Hold Humidity

NEW YORK CITY—Air conditioning is vitally important for an IBM 705 electronic data processing machine put into operation here at the New York Life Insurance Co., recently.

Basic equipment for the air conditioning system includes two Trane "CentraVac" water chilling units.

The "brain," which is said to have been the first of its kind in the life insurance industry, and one of the largest and fastest in the world, is made up of a combination of electronic components constituting a complete data processing unit.

Days—even months—will be saved for the company as the brain computes and keeps tab on valuation and dividend records of nearly 4½ million

New York Life policy holders.

Largely surrounded by walls of glass, the brain which has a vast electronic storage capacity or "memory," has the ability to calculate at unbelievably high speeds.

A central processing unit, which performs calculations in millionths of a second, has the function of comparing several alternatives and selecting the most appropriate—or in other words, it can make logical decisions based upon predetermined or calculated conditions.

Inside the walls of glass where the fast-thinking IBM 705 operates at a speed which makes words or numbers available for calculation in 12 millionths of a second, the Trane CentraVacs have the dual role of cooling the components of the brain, and maintaining proper humidity control for the protection of the magnetic tapes.

Operation of the built-up air conditioning system begins with the pre-heating of ventilation air, which is then mixed with return room air.

Next, this air is passed through a series of filters to take out any foreign material which may be brought in with the outside air or picked up by the return air.

After going through a water spray where moisture is added for proper humidification, the air is sent over a cooling coil—the coil being supplied with chilled water from the units.

The cooled air then moves through a system of ducts, where it passes over a reheat coil, and is finally introduced into the two cooling zones.

Part of the air goes to the room itself, and the remainder, directly to the electronic equipment. The electronic brain is equipped with a fan for internal distribution of the air for uniform cooling.

Installation of the air conditioning equipment was handled by The Frank A. McBride Co. of Paterson, N. J.

AIR CONDITIONERS ARE



7 MORE BIG REASONS WHY IT PAYS TO BE A WESTINGHOUSE DEALER!



1. A Brilliant New Concept in Air Conditioning—MASTER-MATCHED UNITS... MASTER local weather, MATCH exactly to home size. 16 capacities from 18,000 to 72,000 BTU/HR for flexibility!



2. All-New, Complete High Style Line—to custom-match any decor! Basic charcoal and beige two-tone styling, plus 4 optional "Choose-N-Change" color combinations.



3. Industry's Best Quality—backed by the most modern research and manufacturing facilities.



4. Advertising PLANNED to hit the heart of your market—WHAT you need, WHEN you need it!... WHERE you need it—right in your own locality!



5. Best Selling Tools in the Industry—simplified selling folders, visual presentation, handy duct-sizing calculator, complete sales training course, premiums... every tool you need to outsell your competitor.



6. Top Distributor Service—competitive prices, fast delivery, technical guidance, complete parts inventory—and more.

7. Prizes for You—and your family. Complete details will be revealed to franchised Westinghouse Dealers soon.

See your nearest Westinghouse Distributor for complete details. For the name and address of your nearest distributor write: Westinghouse Air Conditioning Division, P. O. Box 510, Staunton, Virginia—or phone Staunton 6-0711

YOU CAN BE SURE...IF IT'S **Westinghouse**

AIR CONDITIONING DIVISION • STAUNTON, VIRGINIA

For more information about products advertised on this page use Information Center, page 22.

MASTER EVERLAST-R.C.-FILTER



Cut to Fit
Filter for
all Room
A.C. Units

- one size for all units
- just cut to fit
- flexible edges seal
- no leaks at edges
- efficient and long lasting
- wash to clean
- cuts easily with shears
- fits snugly
- low inventory costs
- filtering media curled Karatin set in rubber
- packed in cellophane

LOW COST—DISCOUNT

MASTER PRODUCTS COMPANY

7000 S. Wentworth, Chicago, Ill.

Inside Dope

By GEORGE
F. TAUBENECK

(Concluded from Page 1, Col. 1) conditioners. They had a price advantage going for them, and if the tests turned out well, their future looked rosy.

The field tests were satisfactory. Several manufacturers were all set to introduce anodized steel tubing in 1957 models. Then, boom! Copper prices tumbled. End of dream—for the moment.

Why did copper prices slide? England began dumping stockpiles. Also Rhodesian production is climbing.

Unique Tribute

Those wonderful folk in Tecumseh, Mich., did a real grand

thing recently. They turned out *en masse* to honor a delivery man.

For 50 years Ernest Van Vliet has made deliveries with a team of horses and wagon around Tecumseh. He is 77 years old and still working at the same job.

The honors included a parade—led by Ernie, his wagon, and the high school band. A real nice thing to do!

New Use for Freezers—1984

"Dope's" 13-year-old son and his buddies doubt not that they'll visit the Moon, Mars, and enjoy other outerspace adventures before they're too old to enjoy the thrill.

Nor are we disposed to be skeptical—so astonishingly rapid is the acceleration of scientific advance. ("Dope's" father hoot-

ed scoffingly at the "crazy idea" of television when we mentioned it after reading imaginative fiction in the Argosy Magazine some 30 years ago.)

Moreover, the refrigeration industry may help Greg and his pals saucer-fly to whatever Rivas in the Milky Way they choose to visit during their four-day weekends.

According to Dr. George Gamow of the American Rocket Society, space-ship pilots and passengers may be frozen, so that their conscious lives would be suspended during the long periods of time they'd be traveling to a star. Upon arrival, those space adventurers could be thawed out electronically, and resume activity with no memory of the passage. Crazy? Wait and see.

Needling Question

Automotive air conditioning

is booming in America. And three of America's huge manufacturers of automobiles (General Motors, Chrysler, American Motors) make other types of air conditioning, too.

Query: How many American auto factories are air conditioned—to increase productive efficiency and employee happiness?

The mile-long Volkswagen automobile plant in Germany is air conditioned, and Volkswagen directors credit air conditioning with improving worker morale, cutting spoilage way down, and stepping up production line speed.

P. S.: Although 65,000 Volkswagen cars have been exported to the United States this year, the order backlog continues to grow.

Owners insist they are mechanical marvels. Coincidence?

Awaken Mommy

Don Irwin of the *New York Herald Tribune* "covered" Richard Nixon on the latter's 1956 campaign. They were in Ishpeming, Michigan when Don's wife attempted to phone him from New York. Three times the telephone operator asked Mrs. Irwin to repeat "Ishpeming," and still she didn't get it.

"Honey," she told Mrs. Irwin, "go get your mother to place this call."

Out of Our Mailbag

Searle Appliance Service
Steamboat Springs, Colorado
Mr. Inside Dope:

The other day I ran across this little "Message to the Serviceman." I had this copy made from the original, which I can vouch was made up by the customer concerned. The Norge Distributor serviceman that I was traveling with in Denver found the original on the top of the washer. I thought perhaps you might like it for your "Inside Dope" column.

Message To The Serviceman

The water ran, the clothes were washed

But spin, it would not do.

Starting over once again

Was very useless too.

The plug switch (Hopax plug) even failed to click

That also made me blue.

When we put in a load of clothes

A powder puff went along.

But none was there when they came out

So that must be what's wrong.

Oh serviceman, dear serviceman

Please fix it now for me.

So that wash nite again will be

Free from drudgery.

I didn't write down the customer's name because at the time I didn't think it necessary. I would say though that it was the only time that I ever found an automatic washer customer with a sense of humor.

ROBERT G. SEARLE

Roeth's Appliances
Troy, Ohio

Editor:

In reading your "Inside Dope" I noticed your article about various slangs.

Just this week I was working on a 1941 model refrigerator that was in a bad state of rusting. The user asked me "if I could make a silk purse out of a sow's ear?"

And then several days before that I had quoted a price on a new refrigerator and the old gent I was talking with came back and said "Boy, that's higher than a cat's back."

Keep up your good work, George, I enjoy you very much.

JACK SHONESY

Everybody Got Problems

Thomas Jordan, of Jordan Supply Co., Buffalo, recently was summoned to City Court on the charge that an entrance door to his place of business swings out across the sidewalk.

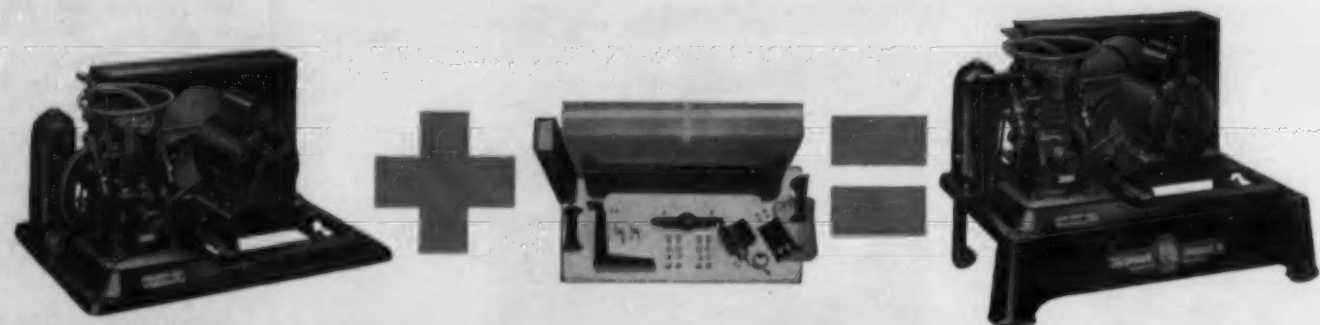
Tom is in a quandary. He explains that the state of New York requires the door, an emergency exit, to swing out. The city of Buffalo, on the other hand, insists that the door swing in. The judge in the case permitted Tom to leave the door open by adjourning the case until April.

CONVERT

from Self-Contained to Remote

IN MINUTES!

ONE Tecumseh UNIT DOES DOUBLE DUTY



Model G50H-1/2 H.P.

Air Cooled Kit

Model RG50H-1/2 H.P.

<p>TECUMSEH self-contained unit</p> <p>represents new conventional line of air and water cooled units</p>	<p>TECUMSEH remote kit</p> <p>for quick, easy conversion of self-contained units into remote units</p>	<p>TECUMSEH remote unit</p> <p>equals a self-contained unit plus a remote kit</p>
--	---	--

Tecumseh's new conventional line has more sales and performance features than ever before. First, you have a choice of 1/2, 3/4 and 1 H.P. units, either air or water cooled. Second, you get the weight and price advantage of self-contained units. Third, you can easily remote any of these units with a new and exclusive remote kit.

Tecumseh designed this line so you can cover a variety of commercial applications at a considerable savings in cost, inventory and shipping.

Tecumseh's new Remote Kits allow one man to remote a self-contained unit in minutes, on-the-job. Two compact, lightweight kits fit all air or water cooled models. The air cooled kit contains two cast iron back legs—one cast iron front panel and name-plate — one stamped steel belt guard and mounting bracket — one control box and mounting bracket — and all necessary fasteners. The water cooled kit includes the back legs, the front panel and name-plate, plus the fasteners.

Note that the Tecumseh Remote Condensing Unit is built up from a standard Self-Contained Unit, plus Tecumseh's Remote Kit. Consider the cost, space and paperwork you save and at the same time, stock a complete line of air or water cooled units. Investigate selling features such as built-in low side oil separators on all units from 3/4 to 3 HP included in this practical, economical line. Here are savings that mean more profitable sales!



The World's Largest Producer of
Compressors for the Refrigeration Industry

TECUMSEH PRODUCTS CO.

Marion, Ohio
Tecumseh, Michigan

EXPORT DEPT.—P. O. Box 2280, 24530 Michigan Ave., W. Dearborn, Michigan

For more information about products advertised on this page use Information Center, page 22.

Preventive Plant Maintenance and Cost, Servicing Truck Units Lead Discussions at NAPRE Convention

DETROIT—Papers on a variety of topics were presented at the 47th annual convention of the National Association Practical Refrigerating Engineers, held here recently.

In one of them, Frank J. Drogosch, chief safety engineer, City of Detroit, discussed Detroit's refrigeration operator ordinance.

Pointing out that there are three classes of licenses, Drogosch reported that at the present time, 2,092 persons are licensed as refrigeration equipment operators. He said that of approximately 234 examinations given in the past year, 104 licenses were granted to successful applicants.

Preventive maintenance by plant personnel was the subject of another talk, given by Bert C. McKenna, chief engineer, Central Cold Storage Co., Chicago, and NAPRE's new president.

McKenna's presentation included a comparison of estimated costs for contracting outside maintenance and repairs with actual costs of performing the same work with plant personnel. It featured cost analysis and slides.

In this visual presentation, details were given on the maintenance and service, as well as replacement work for pipe line refrigeration service in the produce district of Chicago.

Among other talks was one by V. W. Snyder, service manager, Thermo King Corp., on servicing truck reefer units.

He told the conferees that operating engineers of large cold storage, industrial ice, food freezing plants, and like facilities are not often expected to

tackle the servicing and maintenance of truck refrigeration units in addition to their own duties.

However, he said, when a situation does arise where the unit will not perform and a valuable cargo is in jeopardy, it is expected that the refrigerating plant engineer will be

familiar with the rudiments of these units and capable of conducting an intelligent investigation of where the trouble might be.

Therefore, Snyder stated, a smart practical engineer learns as much about units used on the trucks around his plant, as time and conditions warrant.

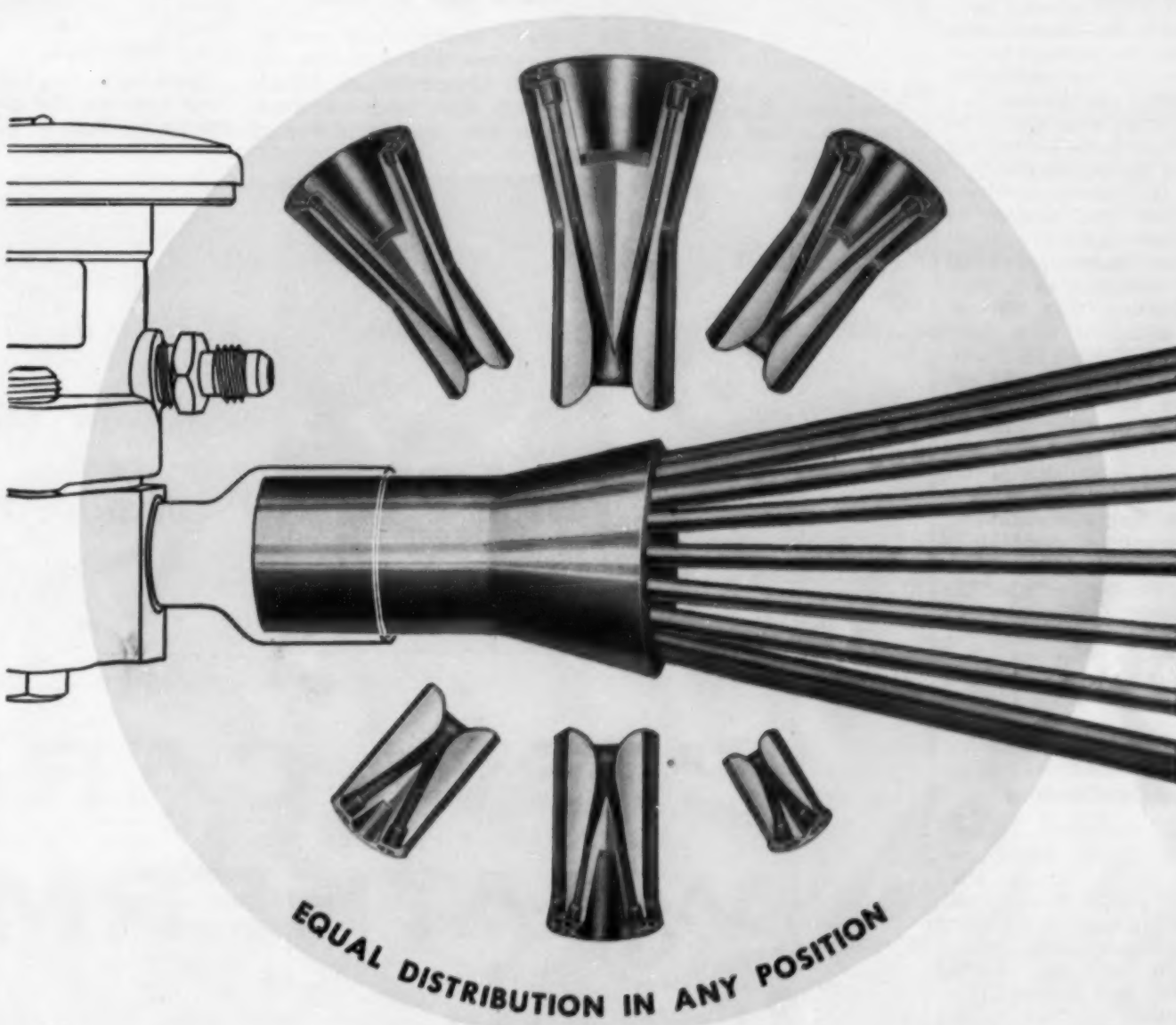
FTC Charges Firm with Anti-Trust Violation

WASHINGTON, D. C.—The Federal Trade Commission has charged Culligan, Inc., Northbrook, Ill., described as "the nation's dominant manufacturer of water conditioning products for domestic use," with unlawfully requiring its retailers not to handle competing products.

A commission complaint charges Culligan with entering into exclusive dealing agree-

ments with its retailers in violation of Sec. 3 of the Clayton Act, which prohibits such arrangements where the effect may be to substantially lessen competition or tend to create a monopoly.

The complaint alleges that Culligan has in operation in the U. S. today more domestic water softening service units than 200 of its competitors combined. Its gross sales for the fiscal year ending April 30, 1955 were approximately \$5 million.



one-piece ALCO venturi-flo distributor

Low pressure drop—Permits closer, more economical thermo valve sizing.

Wide application range—from 25% of capacity to 150% of rated capacity.

One-piece—No nozzles or orifice plates to stock and install.

One Venturi-Flo replaces distributors requiring as many as 6 or 7 nozzles!

Easy to select—No nozzles to size.

BUY QUALITY—BUY ALCO

WRITE FOR BULLETIN 188-55



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of Thermostatic Expansion
Valves; Evaporator Pressure
Regulators; Solenoid Valves;
Float Valves; Float Switches.

Rearranges Electrons, Gets Temperatures to .004° from Absolute 0

PASADENA, Calif.—Temperatures as low as .004° above absolute zero have been reached by Dr. John Pellam of California Institute of Technology.

Pellam's research has developed a demagnetization system which rearranges electrons. His work is considered a valuable tool for investigating curious properties of matter at extremely low temperatures, according to the annual printed report to Cal. Tech's Board of Trustees, recently released.

James R. Miller, director of Cal. Tech's news bureau, states Pellam's work is "pure science," has no immediate practical objective.

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WATER-COOLED CONDENSERS

WRITE FOR OUR NEW CATALOG

How To Get Better Heating Installations

Nessel Discusses Warm Air Heating In Terms of Human Comfort; Investigations Show Improvements Necessary

DETROIT—"There are too many abominable installations of warm air heating units!"

So charged C. W. (Bill) Nessel, roving ambassador of Minneapolis-Honeywell Regulator Co. in a speech before the Detroit Warm Air Heating Association here recently.

"And in many cases there is no improvement!" Nessel further commented.

'Tell Homeowner What To Expect'

"The way to change this situation for the better," he advised, "is to tell the homeowner—particularly the housewife—in plain English what should be expected from warm air heating in terms of human comfort."

Nessel is "thoroughly convinced" that the answer to getting better heating installations is the contractor should "use your education as to what is good heating, then sell the customer on it!"

On "Better Heating for Greater Comfort," Nessel cited examples he encountered as a "professional snooper" in his role as chairman of the field investigation committee of the National Warm Air Heating & Air Conditioning Association.

The committee decides, he said, on houses to test in given seasons according to "what the heating industry seems to need." Last year, he continued, we tested houses about 10 years old, each of which was to have air conditioning installed shortly.

Problems Cited on Adding Conditioning

As the committee checked operations, Nessel found this situation to be "a big job." Many don't realize, he cautioned, there is a "lot more to installing air conditioning than simply hooking it into an existing heating and duct system."

In checking on "how cooling might hurt" a heating system when sold on the basis of using existing ducts and registers and have proper cooling results, Nessel opined, "it's just no good!"

Explaining how the field investigators accomplish their job, Nessel said, "we locate a house which fits our investigation, talk it over with the homemaker, show her the instruments we will use, and ask 'Will you do it?'"

"Usually she will say yes, so a man spends a week there checking."

"First thing the 'snooper' looks for," stated Nessel, "is the position, during heating months, of mother, children,

and household animals to determine quickly where the area of greatest heat loss is.

"If the woman is a 'toe-tucker,' that is she turns her toes up under her while seated, make a note of it. If the cat is a 'piano-sitter,' that is another indication. Should the dog be lying on the floor, check that spot—it usually is the warmest point on that floor."

"The heating is all wrong in the described situation," Nessel warned. Where the situation is that usually the floors are too cold, the expert castigated the heating contractor for "not doing his job."

Even when it is pointed out to them that their heating plant

isn't performing at par, many women still "think" they have a good unit, Nessel asserted. And the man "who installed it must be good—he's been in business for 20 years!"

Reemphasizing his point, Nessel said, "Tell people what to expect from a warm air heating system, instead of talking to them about what the 'furnace' can do."

Perimeter Heating Called 'Best' for Some

We've learned from our investigations, and from the correlated University of Illinois research, that "perimeter heating is best in many types of

houses," the expert declared.

"In many houses, there is 'cascading air' at 300 to 400 f.p.m. from a window down to the floor. As the heat tends to move toward the outside some of that air will hit the windows and bounce off and down to the floor. However, in some houses, heat from the floor in a true perimeter system will push that cascading air back up," Nessel stated.

"One of the worst examples, we found," commented Nessel, "of great heat loss was in the house with a crawl space beneath it. If a moisture barrier is placed directly under the floor, the heat loss is still great. We learned that the moisture barrier should be placed on the ground so heat recirculates back upward and keeps the floor warm underneath."

"Slab floors, too," he went on, "lose heat to the ground. In certain instances we found there

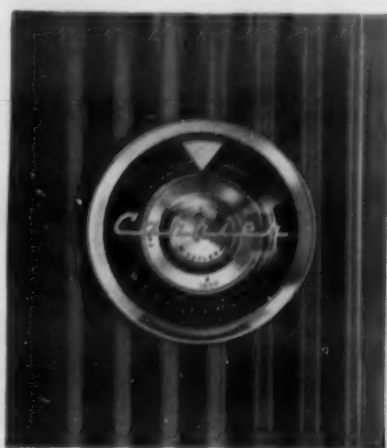
was so much heat loss from a slab floor that grass was growing in its immediate vicinity in mid-winter with an inch of snow on the ground not half a foot away!"

"And in many cases, the middle of a slab will retain part of the heat passing through, then a 'flywheel' effect is formed when heat is returned to the room."

High Sidewall, Ceiling Registers Lauded

For those who sneer at a high sidewall or ceiling return air register, Nessel had this to say: "Our thinking in warm air heating has lagged for 20 years. The fluid heat people have put return air registers up high for a long time. Evidently our thinking is a holdover from the gravity days. In many cases it is best to put your return air high up."

(Concluded on next page)



New Golden Aerodiol. It's 22-karat gold-plated and beautiful. Lucite dome hinges over main control, thermostat knob and reset button. Easy reset reduces service calls.

*the all-new, all-around
air conditioner
designed for lower
installation costs!*

NEW CARRIER WEATHERMAKER

Here's the first self-contained air conditioner designed for lower installation costs—with or without ductwork. Check these exclusive new time-and-trouble-saving features:



ADAPTABLE five-way air return. Duct return through bottom or back. Or matching pedestal base can be added so air returns at front or sides.



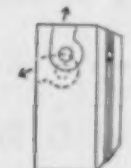
PRE-WIRED electrical center. All connections are made in one outlet box at the side. No additional internal electric wiring is necessary.



EXCLUSIVE solid front panel. No return air grille to block off for duct jobs. Snap locks release panel for easy access. No tools are needed.



EXTRA-LARGE add-on plenum. Easily mounted for installations not requiring ductwork. Hinged grille panel is counterbalanced for easy access. Full directional air control.



ALTERNATE fan discharge. L-shaped fan platform easily inverted for rear discharge where headroom is low. You avoid costly cutting and patching of unit in changing flow.



BUILT-IN PROVISION for heating coil. No need to alter unit when you add matching heating coil—uses either steam or hot water to heat the same area cooled by unit.

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PRESSURE GAUGES and Dial Thermometers for all services.

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Better Heating Installations --

(Concluded from preceding page)

Of interest, Nessel continued, on standards of this industry with respect to comfort, we found that "when a thermostat is holding indoor temperature at 71° F. and outside temperature drops to 60, temperature within that house at floor level will drop to 68°, a loss on the average of 3°. If room temperature is set at 72° on the thermostat and outdoor temperature drops to 50°, room air floor temperature will go down to 66°. Similarly, if outdoor temperature drops to 40°, floor temperature will lower to 64°.

"It follows regularly and consistently as clockwork," Nessel averred.

Offers Rule-of-Thumb

As a rule-of-thumb, "you can evaluate in increments of 10° times 0.2. And for outdoor

temperature drops of 10°, there is an average drop of 1° in rooms from mid-height to floor level."

Belaboring heating contractors that "we are selling warm air heating equipment in the most out-of-date fashion of any household appliance," Nessel again pushed his theme that "we must convince the homeowner to buy heating units according to performance in his home, not according to generalized specifications drawn up.

"We've been selling heating on a wrong basis," he badgered. From 8 to 10% of the cost of a new home was for heating. Now its down to around 2% at our expense. There is less money in it for us. Wake up! Start selling heating in terms of human comfort, not what 'this furnace' can do!"

Querying whether or not "we

can establish standards so we can tell whether a warm air furnace will do this? The answer is "Yes, we can. And competition must then meet us!"

"In certain types of basementless homes," the expert explained, "our investigations found that the hotter heating air remained at the ceiling. As a result this gives the least economy. There is a greater heat loss through the ceiling.

"We learned there could be a temperature difference from floor to ceiling of 38°. In many instances there could be 68° floor temperature in certain homes, and be 106° at the ceiling!

"With a high sidewall register," Nessel stated, "and floor return register, cold air will drop, be returned to the furnace and have to be reheated.

"Dropping air doesn't warm the floor—it is taken into the ground, in a basementless home,



Drive for Adequate Heating

MEETING in San Francisco to plan their 1957 drive to educate the public and builders on advantages of adequate warm air heating installations "to reverse a trend to minimum furnace and distributing systems," were these members of the board of directors of new Warm Air Heating Institute of Northern California. L. to r. are Joseph R. Boudreau of Belmont, Harold Boothby of Sacramento, Tom Duval of Stockton, Robert G. Tuck of San Francisco, Jess Wilson of Vallejo, J. E. Hedquist and James F. Deane of San Francisco, Paul Hammond of Pasadena, Sam W. Terry, Sr., of San Leandro, and executive manager Dar Knowles.

too fast. As a consequence, in this situation this makes the heating plant too small.

"To properly heat a house, the contractor should apply the information he has. It's in the manuals. It's all design."

Nessel recommended "ideal" floor temperature of 70° from wall to wall. "There is a 2-3-in. space between duct and wall which will be colder but no one is near that anyway." We would consider it "acceptable if the floor temperature was not less than 65° wall to wall."

Contemplating a generalized design house, Nessel said "there should not be a total temperature variation in a six-room house of more than 2-4° room to room throughout the structure.

"But in many basementless houses, we found the average to be 6-8° and sometimes 10°. Balancing dampers is one solution.

"However, sloppy jobs are hazardous to our industry!"

New housing construction trends cause the warm air heating industry trouble, Nessel believes. "This creates a major problem in good heating and cooling."

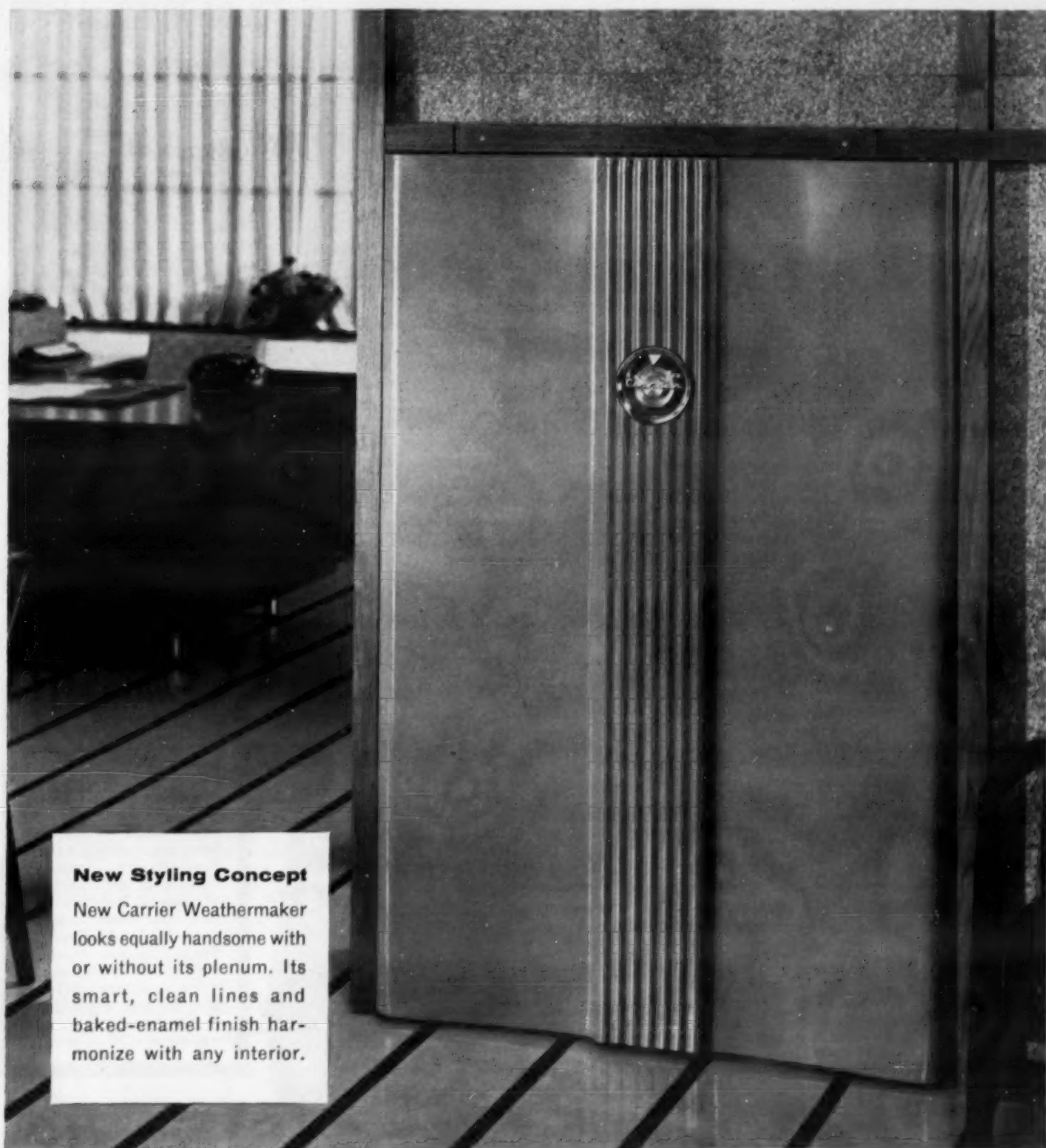
The tri-level house, he said, "is throwing the industry into a tailspin."

He emphasized that the heating contractor must "treat each tri-level home as if each level were a separate house. And it's even worse to cool!" he declared.

Cites Troubles In Tri-Level Home Heating

"Framing creates a problem in this type house for installing ducts," Nessel commented. "Temperature gradients from floor to ceiling extrapolated into specifics can amount to 36°.

"Once again I say, use your education as to what is good heating. Tell the homeowner in plain words exactly what he should expect from heating in terms of human comfort. Design a heating system to fit those needs. And we'll offer good heating and continue to grow as an industry," Nessel concluded.



New Styling Concept

New Carrier Weathermaker looks equally handsome with or without its plenum. Its smart, clean lines and baked-enamel finish harmonize with any interior.

FREE CATALOG!

Full details and complete specifications on the new Carrier Weathermaker. Just mail the coupon.



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Firm _____
Address _____
City _____ Zone _____ State _____

For more information about products advertised on this page use Information Center, page 22.



USDA Warns

Too Much Produce Display Space Can Hurt Buying

WASHINGTON, D. C. — A in a cooperating store were purchased 16% more items and cut their shopping time in the produce department by 12%.

Researchers found that three small aisle displays of the produce department hindered movement of traffic criss-crossing between two long produce counters. Three displays were removed, reducing counter space by 48 sq. ft. in this market, but customers

Tork Changes Name In Reorganization, Expands 'Advanced' Controls Research

MOUNT VERNON, N. Y.— Broad reorganization of the former Tork Clock Co., Inc. into the new Tork Time Controls Inc. was announced by Cyril J. White, president.

Along with the change in name, to one more indicative of the company's products, the firm's modernization is shown by the development of new engineering talent, the broadening of management, and the increase of capital funds, the announcement said.

According to White, Tork is expanding its research and engineering activities to provide the "advanced" time switch controls which are required by the commercial refrigeration industry.

Heading the roster of the new engineering staff is John H. Beier, formerly manufacturing first vice president of County Trust Co. (Westchester); Cyril J. White, president of Tork Time Controls Inc.; Dorset J. Nordon-Ketay Co. Beier is already well under

way in supervising the development of improved precision time switches for use in commercial defrosting, and announcements to the trade will be forthcoming shortly, it was stated.

White said capital stock in the new company has been increased by 15,000 shares.

"While broadening the internal management base, and allowing for wider ownership and control," he continued, "we also strengthened the board of directors by the addition of other proven executives."

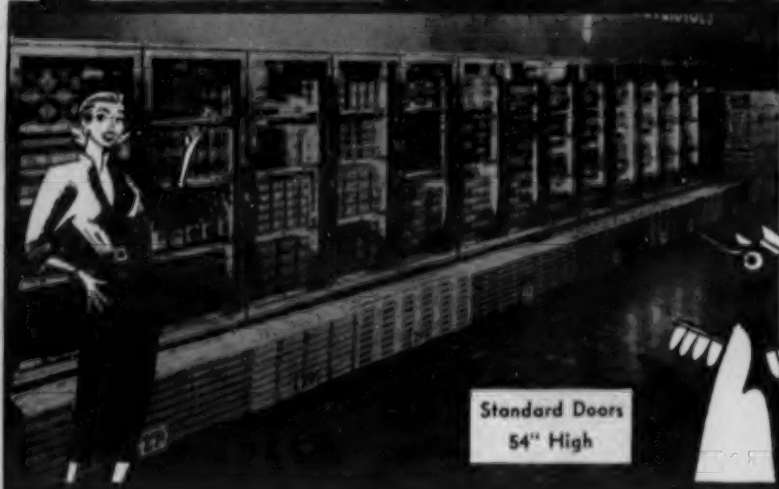
The new five-member board consists of Arthur A. Berard, president of Ward-Leonard Electric Co.; Frank H. Foley, of the legal firm of Morgan, Bagg, & Persons, Fred E. Goldmann, first vice president of County Trust Co. (Westchester); Cyril J. White, president of Tork Time Controls Inc.; Dorset J. White, vice president and director of sales for the company.

NOW! Fully tested and ready
TORKK
Foolproof, self-closing, hinged doors

KING SIZE **SERVUE** DOORS



The new
KING SIZE Barrdoors show
more to sell more. Doors
shown are 63" high, the
model is 5' 5" tall



Standard Doors
54" High

ALL BARRDOORS FEATURE:

- mirror bright frames, sagless, adjustable shelves, 8' or 9' metal ratchet posts, 48" Slimline lighting. (U.L. Approved)
- Electrically heated doors for high humidity areas. (U.L. Approved)

All doors are insert type, set into heliarc welded frame, and ready to place into any opening. Glass is two pane, hermetically sealed, bearing 5 year warranty.

Some desirable areas open for factory representatives.



BARR MANUFACTURING CO.

8925 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Comparative Values, Advantages of Enclosed, 'Rapid Start' Lamps Given

COLORADO SPRINGS, Colo. —The Refrigeration Research Foundation, in a recent bulletin, called attention to an article by T. Summers, Jr. of Westinghouse Electric Corp.'s Lighting Div. on fluorescent lighting for refrigerated areas.

Published in *Illuminating Engineering*, the article is a report of work conducted with the assistance of the foundation and the cooperation of A. B. Efroymsen of the National Terminals Corp. of Cleveland.

Summers presented his findings last year before the Illuminating Engineering Society at a technical conference in Cleveland, TRRF pointed out.

The results show the comparative values and advantages

of "Slimline" lamps enclosed in tubes and "rapid start" lamps without enclosure.

TRRF noted these remarks of various attendants: The study "is particularly interesting because the tests were made in a temperature area on which we have not had much previous information. . . . The paper is valuable because there has been considerable confusion regarding proper lamps to recommend."

"The work extends the temperature range where information is available on fixture operation." "For storage using lighting throughout the working day, the use of fluorescent, or mercury, has great possibilities."

SO HALSTEAD & MITCHELL
ENGINEERS SAID:

**"LET'S STOP
COOLING TOWER
RUSTING and
ROTTING!"**

RUSTING

There's no "one-coat" protection which will stop cooling tower rust. Needed are super-strength bonding of protection to metal, toughness, inertness, flexibility, and a watertight barrier. Only by Halstead & Mitchell are you offered the 3-coat protection of Vinsynite, Vinyl Zinc and chlorinated rubber — the most advanced protection ever devised to prevent cooling tower steel from rusting.

ROTTING

We do more than praise the long life of wood used in our wetted decks — we are the *only* manufacturer who offers a 20-Year Guarantee on wetted deck wood against rotting or attack by fungus.

Halstead & Mitchell

BESSEMER BUILDING,
PITTSBURGH 22, PA.

AT LEADING WHOLESALEERS EVERYWHERE

'Real Cool' Record Spinner Credits Conditioning for New High Mark



MARATHON disc jockey Don King of WBML, Macon, Ga., established a new record for continuous music broadcasting over a 124-hour period in this Volkswagen "Micro-bus" temporarily air conditioned by a Carrier 3/4-ton room air conditioner.

MACON, Ga.—Air conditioning was credited with playing an important role in the record-breaking platter spinning marathon established here by a local radio announcer.

Don King set up headquarters in WBML's Music-Mobile on a Saturday and parked at the entrance of a local residential development to begin his five-day-and-night air conditioned radiothon.

During the time he was continuously on the air, Georgia temperatures baked the outside of the trailer in near 100° heat—enough to break the spirit of any radiothoner. But King stayed real cool along with his records. In fact, he even gave the cooling device to the visitor guessing nearest the number of recordings played.

A 3/4-ton Carrier room air conditioner placed inside the rear door of the converted Volkswagen Micro-bus by Macon dealer, Culver Jordan, Inc., provided cool, dehumidified, and filter-cleaned air to the announcer and equipment. Electric power from a model home furnished electricity for the air conditioner and radio equipment.

"I couldn't have stayed on the air without air conditioning," King said.

Air conditioning not only played an important role from the comfort standpoint, said King, but it also was important in keeping the recordings free of dust and dirt, since the windows of the mobile studio could be kept closed at all times.

An estimated 12,000 Macon residents visited the marathon disc jockey title holder in his air conditioned studio.

Permaglas Appointment

KANKAKEE, Ill. — Leonard Martikonis has been named advertising and sales promotion manager of Permaglas Div., A. O. Smith Corp. here.

Handy Tube Bender

Smoothly Bends any pipe or Tubing 3/8"-1 1/8" O.D.



• Just a twist of the wrist assures perfect, even bends — right angle, any angle, U and offset. Save enough on ONE job to pay for your HANDY BENDER.



See your supply house—or write for free folder today.

HOLSCLAW BROS., INC.

428 N. Willow Road • Evansville, Indiana

One-Ton Package Unit Air Conditions Radio Room, Solves Transmitter-Receiver, Sunload Heat Problem

DENVER—A 1-ton packaged air conditioner recently solved an unusual problem in the offices of Spratlen Materials Co. here.

To save time and cut operating costs for its 40 large mixer trucks which supply ready-mix concrete throughout the Denver area, the Spratlen firm installed an ultra-high frequency radio communication system between office, plants, and trucks.

However, this created a problem at the main office where the radio transmitting-receiving facilities were located. Noise disrupted the staff in its duties.

Frank T. Spratlen, head of the distributing organization, unwilling to relocate the equipment away from executive supervision, decided to build an addition to the general office to house the radio units.

But he didn't foresee another problem which then cropped up in the 5 by 10-ft. addition.

A combination of heat from the radio equipment and the heavy sunload on the sliding windows caused the small room to become unbearable for operators.

So Spratlen called in an air

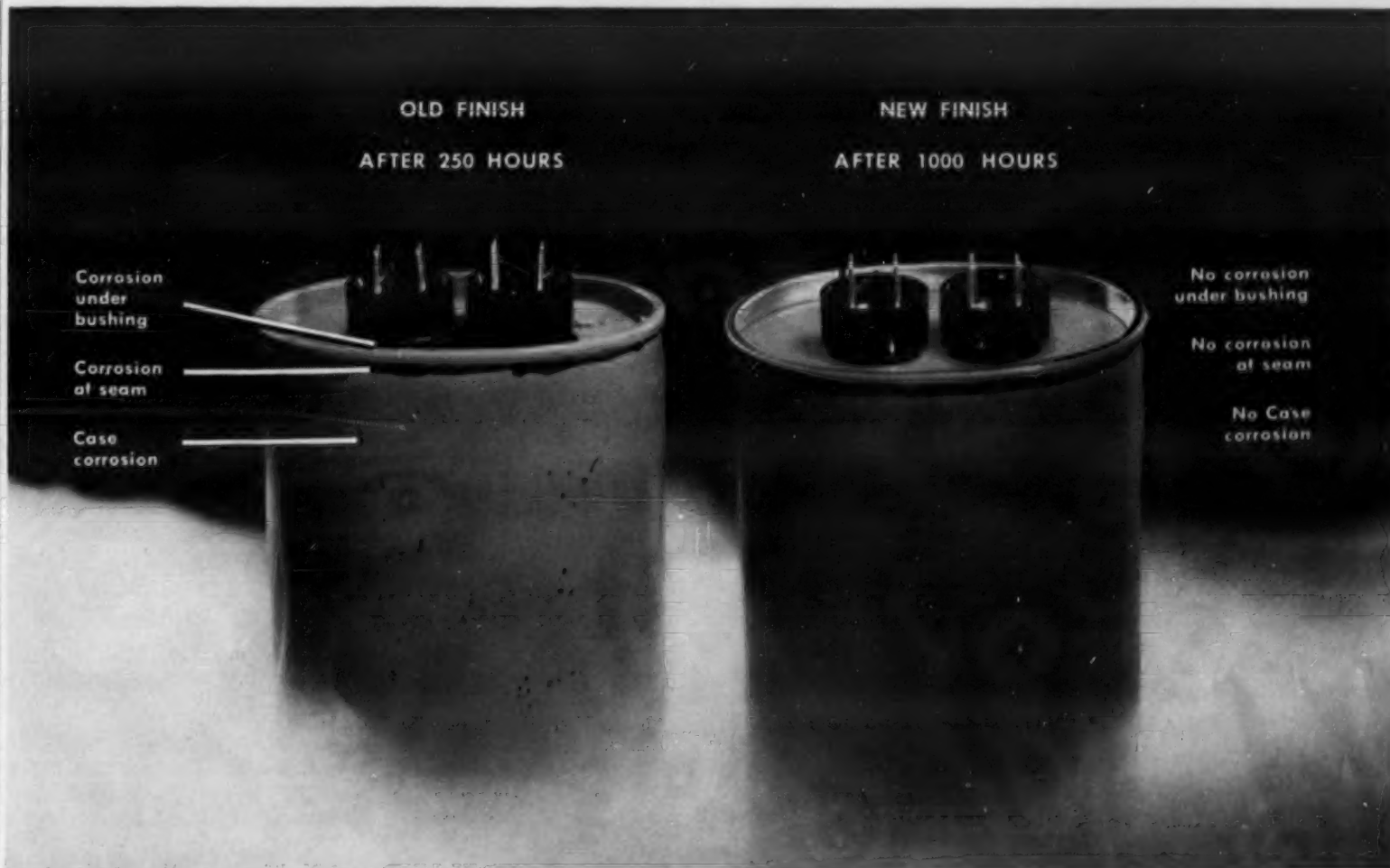
conditioning contractor who installed a 1-ton Frigidaire air conditioner to create reasonable working conditions for the radio operators.

Airtemp Outlet Moves

NASHVILLE, Tenn.—Central Air Conditioning & Heating, Inc., local Airtemp outlet, recently held open house here, giving as a door prize a new Crosley refrigerator when it moved into new quarters at Thompson Lane at Kraft Dr.

Hotel Gets Cooling

GREENSBORO, N. C.—An addition of 36 air conditioned single units to the Holiday Inn hotel here was begun recently.



20% salt fog corrosion test at 95 degrees Fahrenheit proves new G-E capacitor finish more than four times more corrosion-resistant than old finish.

New finish gives General Electric capacitors 4 times greater protection against corrosion

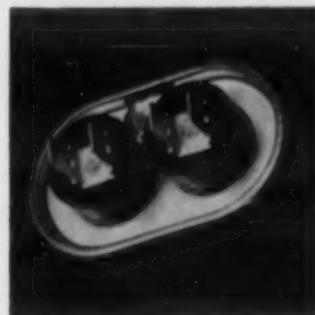
General Electric is proud to announce a new finish for its air conditioning capacitors that virtually eliminates corrosion. A combination of cadmium-plated covers and new Granite-Gray paint gives the General Electric capacitor more than four times the corrosion resistance of any previously-used finish.

New, Granite-Gray paint has been life-tested in a 20 percent salt fog atmosphere for 1000 hours at 95 degrees Fahrenheit with absolutely no indication of corrosion. This remarkable, new case paint gives longer life to your General Electric air conditioning capacitors, even under the most adverse climatic conditions.

Cadmium-plated covers provide maximum corrosion protection for normally inaccessible areas—under the bushings and at the double rolled seams. The tough cadmium coating seals off these "trouble spots"

from the harmful effects of corrosive atmospheres.

The new corrosion-resistant finish is now available on General Electric's full line of capacitors for air conditioners. For more information about General Electric's air conditioning capacitors with the new corrosion-resistant finish, contact your nearest G-E Apparatus Sales Office. Or write for bulletin GEA-5895, "Capacitors for Air Conditioning Equipment." General Electric Company, Section 448-1, Schenectady 5, N. Y.



Cadmium-plated covers provide extra protection under bushings and at double rolled seams.

Progress Is Our Most Important Product

GENERAL  ELECTRIC

For more information about products advertised on this page use Information Center, page 22.

They'll
Do It
Every
Time

by

Jimmy
Hatlo



Prediction: Big New Type of 'Home Automation Dealer'

(Concluded from Page 1)

Currently there is considerable overlapping among the various types of dealerships which sell and install commercial and residential air conditioning, home heating, commercial refrigeration, household appliances, complete kitchens, and plumbing fixtures.

Not only is that situation confusing to national marketers—it's confusing to homeowners! Remember: more than 25,000,000 American "old" homeowners presently have a desire to upgrade their homes, according to FHA estimates. However, they are frustrated in too many cases. Either no salesman calls on them, or there are too many dealers for too many items in the picture. Usually both situations are true simultaneously.

Loads of home heating dealers install gas and oil-fired furnaces, along with wet heat jobs. Furthermore, "old line" commercial refrigeration and air conditioning outlets recently have become heating dealers. Biggest and most progressive appliance dealers and plumbing concerns are getting into the air conditioning picture, also (and into one another's hair, as usual).

As a matter of fact, so intense is the competition amongst appliance manufacturers that quite a few plumbers, furnace installers, and commercial refrigeration dealers also sell "white goods" on the side.

Result is that homeowners don't always know where to turn or whom to trust in the welter of competitive claims. Hence, it can be predicted that these variegated functions will consolidate someday, somehow, and home-how, in many home towns. Reason:

Homeowners yearn to deal with ONE local enterprise which will serve them well—and which will take full responsibility for servicing—when buying mechanical devices to improve their family living standards.

Therefore, it's in the cards that the successful contractor-dealer of the future may evolve into a new breed . . . **HOME AUTOMATION HEADQUARTERS.**

He will provide a virtual supermarket for new home builders and lived-in-home renovators. From his you-want-it-we-have-it headquarters, house improvers should be able to buy practically any "big ticket package" they need. The future home automation "supermarket" will have this dis-

tinct difference from cash-and-carry food emporia. It will be able to *repair* home automation devices. The proprietor will employ expert mechanics, plumbers, electricians, steamfitters, carpenters—and know his way around City Hall. Therefore he can keep his customers happy forever afterward—and sell them again and again on further home automation.

As we envisualize him, he will be able not only to sell, but to install and service:

"Package" kitchens, laundries, and bathrooms,

Complete air conditioning (including separate heating or cooling where desired),

Recreation rooms, remodeled attic havens for kids, apartment conversion, additions, enclosures, roofing and insulation, mechanical windows, adequate wiring, and possibly even interior decorating.

New devices for home mechanization coming out in the ensuing decade will be ensnared by his spiderweb, too. He will spread his overhead over a wider and wider variety of products—hence he can afford to hire and train a corps of excellent salesmen along with competent service personnel.

And he will become recognized as Home Automation Headquarters in his trading area. Chances are he will represent only a few product lines because, in the meantime, more manufacturing mergers will have occurred.

Ideally he will attain dollar volume comparable to a Big Three auto dealer. As we envisualize him, however, his operation should become much bigger than that of top auto dealers.

All this spreading-out will require considerably more capital than the average appliance dealer—or heating, plumbing, air conditioning, commercial refrigeration contractor—has access to nowadays.

What better, easier, and quicker way to acquire it (plus lists of satisfied users and experienced "know-how" personnel) than through retail mergers on the local level?

From the buyer standpoint:

Many a woman living in an older home she once thought luxurious is dissatisfied when she sees the modernistic kitchens and bathrooms and air conditioning in lower-priced 1957 model houses. Immediately she becomes a hot prospect for these "packages"—if specialty salesmen follow through, and

Trade Mark
reg. U.S. Pat.
Office:
Est. 1926

AIR CONDITIONING
& REFRIGERATION

NEWS

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'The Conscience of the Industry'

Published Every Monday by BUSINESS NEWS PUBLISHING CO., 450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924. Subscription Rates: U. S. and Possessions and Canada: \$6.00 per year; 2 years, \$9.00; 3 years, \$12.00. All other countries: \$10 per year. Single copy price, 40 cents. Ten or more copies, 30 cents; 50 or more copies, 20 cents each. Send remittance with order.

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VOLUME 79, No. 14, SERIAL No. 1,446, DECEMBER 3, 1956

if "one stop" dealers can fulfill her desires satisfactorily.

Personally attuned "package" kitchens have great appeal for many housewives, particularly those whose happy families entertain a lot. Also they intrigue women who desire more freedom from household task monotony, and those who have a flair for original home decoration.

The colorful "decorator" (or "holiday" or what have you) kitchen idea can be applied not only to new homes, but to old houses inhabited by restless wives, who formerly were hell-bent on shifting furniture around every so often—to their settled-down husbands' discomfit.

Number of families which are ready to buy "big package" home modernization programs (including kitchens, bathrooms, laundries, air conditioning) instead of one new labor-saving home machine at a time, is growing steadily. Thanks to new concepts of time payments, these "big-ticket packages" don't make Father throw up his hands in horror.

This happy circumstance indicates that our related and complemented home service industry's opportunities can be enhanced tremendously by the establishment of Home Automation (supermarket-type) Dealers.

Sales and servicing responsibility for all home equipment by a single BIG dealer whom buyers trust (and who can arrange financing) is practically non-existent in most cities and towns.

Only the best financed and most imaginative metropolitan retailers presently are able (or even in the mood) to enlarge enough to become Home Automation Headquarters for their communities.

No doubt that's why a large percentage of "packaged" kitchens, laundries, bathrooms, and all-year home air conditioners currently are sold directly to speculative builders of new homes and apartments.

Major manufacturers realize they need to penetrate the much bigger market of "ole home" occupants, though. Hence, they are wooing those relatively few BIG dealers who are prepared to sell and service ANYTHING for household mechanization. More important, they plan to create more such dealers (through credit arrangements, talent scouting, and management assistance).

Otherwise factory branches will have to do the job in quite a few localities.

We don't mean to imply that the independent dealer who specializes on a few products is through. Not at all. He is the backbone of the industry. As a matter of fact, the big Home Automation Dealer will help him stay in business by routing the discount houses and wheel-and-dealers.

The need is there. The opportunity is here. All that remains to be seen is WHO will take the Giant Step, and how soon.



FRIGIDAIRE BREAKS THE DESIGN BARRIER

Today marks the beginning of a fresh and exciting new era in home appliance design.

You've seen it predicted—asked for, even clamored for—in this and other publications—in architects' and women's publications as well.

You saw the hint of it again in the overwhelming ovations given the "Kitchens of Tomorrow" at the Motoramas.

And now it's here—the most sweeping and welcome change in appliances in a score of years!

The Frigidaire Sheer Look!

The look of the Kitchen of Tomorrow artfully crafted, down to the last inch, for the *kitchens of today*.

Here is no mere tinkering with chrome—but a complete family of all-new appliances, all new inside and out—in *every price bracket*—perfect design-mates to each other.

Here are the first *freestanding* appliances with every surface plumb-line straight, every corner T-square honest, to make the "built-in" look a matter of simply shoving them into place.

Here is the last good-bye to the "kitcheny look"—to space-wasting bulges and dirt-catching curves, senseless ornamentation, and handles and hinges that butt out and snag and bump.

Every new Frigidaire line is sheer, every surface flat. Every line is elegant. And they build in, blend

in, with standard cabinets and units—for a clean sweep of beauty that outshines even today's most expensive "custom-built" kitchens—and that enhances *any* décor.

Just *one* new Frigidaire appliance is the starter toward the Dream Kitchen on every woman's mind. And for her, this is style insurance for the future—the soundest of investments.

For you, the Sheer Look multiplies multiple-unit sales—and opens the door to *profitable* kitchen modernization business at a new low cost for you and your customer.

Only when you examine these stunning new 1957 appliances in detail—and see their many ingenious engineering and design ideas—will you realize how far Frigidaire and General Motors have gone to bring you the appliances of the future today.

Why this tremendous investment in design-styling for the future?

Because we of Frigidaire believe that the biggest and best years in home appliances are still to come. Because we believe that the long-laggard replacement market will not be won by price alone, but only by products so outstandingly new and different that they keep pace with the ever-insatiable appetite of the American people for better living. We of Frigidaire are wholeheartedly committed to that kind of program for the future.

THE SHEER LOOK IS HERE →

FRIGIDAIRE PRESENTS

The most exciting change that



It's so all-out stunning you can't believe your eyes.

But it's here—the Sheer Look! A whole new design idea that makes a dream kitchen come true.

On Frigidaire Refrigerators, Ranges, and Laundry Appliances for 1957, every line is straight, every corner is square, the whole look is sheer—to

bring the beauty of modern simplicity into present kitchens, or kitchens of the home-you-hope-to-build.

Here, surely, is styling so right that it sets the trend and pattern of tomorrow.

Here, too, are the *most mechanically perfect appliances ever built*—all new, with the best in engineering from

both Frigidaire and General Motors.

Open any door, for new surprises. You'll see interiors that sing with colors, like fashion-first Charcoal Gray. You'll see a refrigerator with a Plan-A-Door that also zips out ice at lever touch. You'll see the final word in automatic ranges—with "Thinking Panels" that practically do your cooking for

Come and see The Sheer Look at your Frigidaire Dealer's style show. Look for him in the Yellow Pages of your Classified Telephone Directory under "Electric Appliances."

THE SHEER LOOK



LOOK

ever came into your Kitchen!

The Sheer Look®, General Motors Corporation, 1956



SHEER LOOK GOWNS by JANICE WELLS

you. You'll see a new laundry pair that hands you a sizable saving every washday.

Come and see these stunning beauties at your Frigidaire Dealer's today. Buy with double assurance—for this is it. *The Sheer Look*—styled to keep you years ahead—and money ahead—for the years to come.

Look for the **SHEER LOOK**



'57 FRIGIDAIRE APPLIANCES



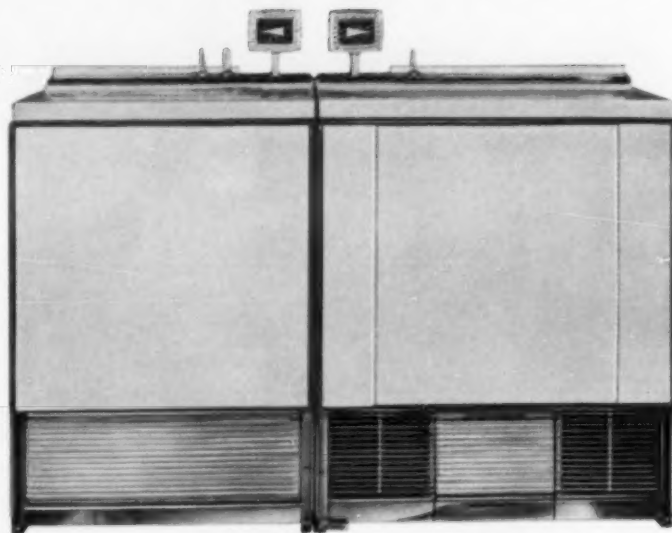
Frigidaire—Built and Backed by General Motors

MILLIONS OF READERS will see this sensational announcement appearing in *The Saturday Evening Post*, *Better Homes & Gardens*, *Ladies' Home Journal* and other magazines. Millions more will be reached by full-page newspaper ads in key markets—featured, too, on the TV program "Do You Trust Your Wife?" on nationwide CBS Network.

FRIGIDAIRE GOES ALL THE WAY WITH THE ALL-NEW SHEER LOOK



Makes every corner count, makes every inch deliver a bonus of space. Inside and out, the Frigidaire Sheer Look is all new and packed with new features and conveniences. Note the almost-flush door handle that can be pushed open from the inside as effortlessly as pulled open from the outside — yet maintains a perfect tight seal. Model shown in fashion scoop "Charcoal Gray"—one of a choice of colors available.

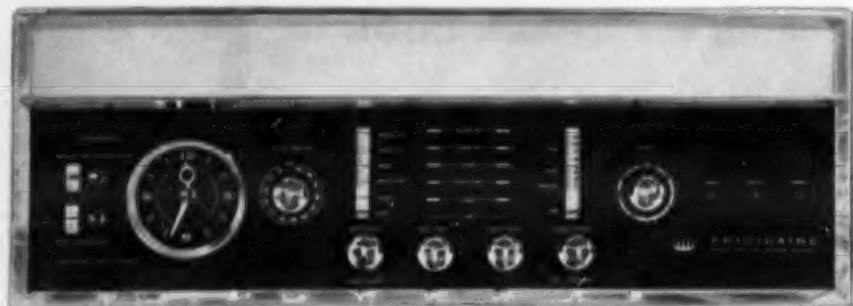


The Sheer Look, too, in all Frigidaire Laundry Pairs, featuring the "savingest" washer ever. Every Frigidaire 1957 appliance "belongs to each other," is a perfect style-mate to the last degree of trim—designed in GM's world-renowned Technical Center.

It's the "handiest" refrigerator ever. Ice cube service in the door, at lever touch. New Plan-A-Door for most flexible food storage arrangement ever. Even bottles come to the finger tips on famous Roll-to-You Shelves. And note the clever contrasting color touches in Hydrators and other handy containers.



The "built-in" look achieved with freestanding Frigidaire appliances melts into modern backgrounds, blends subtly into contemporary kitchens. Built to standard kitchen measurements, they fit and look like custom-designed built-ins.



Meet America's "thinkingest" range with the all-new "Thinking Panel." Controls every operation, helps make pots and pans automatic. New Cook-Master Oven Control is a miracle of simplicity! New vertical Easy-View Controls read like thermometers. New Radiantube Sear-Speed Broiler is super-fast, sears like charcoal. Smokeless ovens, with the famous Miracle Filter.



The trademark is new, too; a symbol of the all-new styling, all-new engineering, all-new thinking in the '57 Sheer Look line—and a reminder, too, that Frigidaire quality, as ever—is uncompromisingly *the finest*.

Northern Calif. RACCA Queries Wholesalers on Sale to Users

SAN FRANCISCO—A questionnaire to northern California air conditioning and refrigeration wholesalers has been mailed asking whether or not they would sell directly to users.

M. M. Smith, attorney and executive secretary for the Refrigeration and Air Conditioning Contractors Association of Northern California, said the bulletin to wholesalers welcomed their suggestion at last month's special dinner meeting that a committee be formed to develop a formula.

A query to ascertain members' wishes on the use of a bid depository for major jobs was included in the letter sent out, Smith said.

Bid depositories are handled through designated banks here by Mechanical Contractors, and Insulation Contractors. Plumbers Contractors Association also uses a bid depository, Smith revealed.

RACCA of Northern California in negotiations with Steamfitters and Refrigeration Local 342 of Oakland, is asking the same contract apply to creameries and independents. RACCA says 342 is giving creameries and ice cream companies a preferred position wagewise, and asks the hourly rate for service be raised 44 cents to equal the installation

rate presently in effect.

Local 342's demands include one cent an hour for apprentice training, to be used to augment the salary of instructors, and to provide for suitable banquet ceremonies upon apprenticeship completions.

Another differential in RACCA's contract with San Francisco UA local 38 has been equalized retroactive to July 1st, with the result 7½ cents an hour more will be paid on the pension item in the fringe benefits to equal the installation rate pension item of 10 cents.

Smith said the retroactive money will likely be put into the fund for the maintenance of the Joint Conference Board, consisting of RACCA members and Local 38 members.

Soldering Contest, Auto Cooling Highlight RSES Meeting



USING AIR CONDITIONING & REFRIGERATION NEWS' book on "Servicing Auto Air Conditioning" to emphasize his talk on controls for auto units is Doc Hogan of Detroit Controls Corp. at the recent Chicago RSES Convention.



ONE feature of RSES Convention was the Mueller Brass Co.'s soldering contest.

Marco Names Allied Components In Texas

WOMELSDORF, Pa.—Marco Industries, Inc., producer of electric motors for the air moving equipment industry, now is represented in Texas and Oklahoma by Allied Components, Inc., Dallas, according to G. Russell Eddy, Marco executive vice president.

J. Robert Matoli is president of Allied Components, it was explained.

This brings to seven the number of field application engineers appointed by Marco Industries, Eddy said. Air moving equipment manufacturers in Ohio, Indiana, Kentucky, New York, Chicago, and in the St. Louis-Memphis-Little Rock areas already utilize the services of Marco field application engineers, it was further pointed out.

Firm Gets Charter

BATON ROUGE, La.—Refrigeration Sales Engineering Corp., 3200 Scenic Highway, has obtained a charter from Secretary of State Wade Martin to operate a refrigeration service business.

Authorized capital stock is \$50,000.

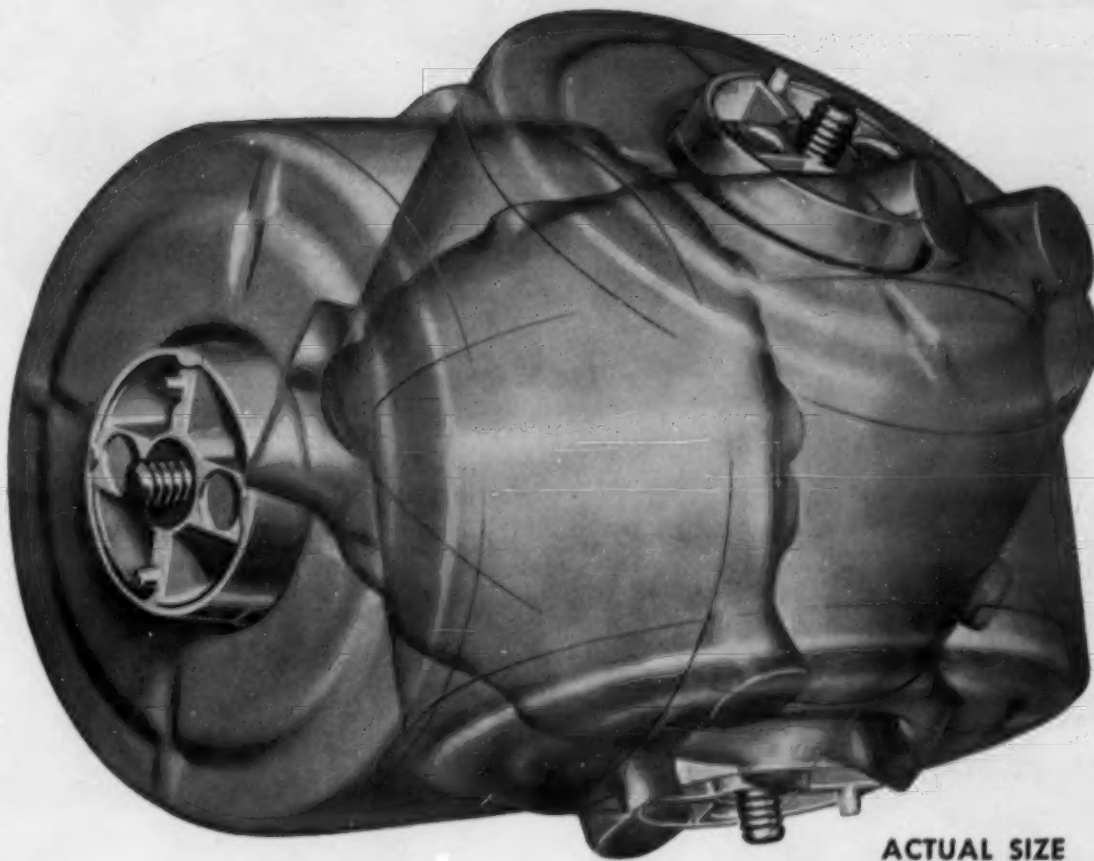
PRESSTITE Insulation Adhesives

- quick, permanent adhesion
- long-lasting high bond
- excellent resistance to temperature extremes
- brush, spray or flow

See your wholesaler or WRITE

PRESSTITE-KEYSTONE
Engineering Products
COMPANY
39th & Chouteau 101 E. Ontario
St. Louis, Mo. Chicago, Ill.

For All-Angle Operation...



ACTUAL SIZE

New Lightweight Redmond Single-Bearing MonoMotor

This new all-angle single-bearing condenser fan MonoMotor was developed specifically for the refrigeration and air conditioning industries in answer to modern demands for a smaller, lighter, yet more powerful motor. It is adaptable for a multitude of applications where a long-life quality motor is needed that will give years of continuous service-free use at low operating cost.

All-angle operation of the AM-4 is achieved through a special thrust bearing and pin assembly. The rotor end play is controlled to very close tolerances, which makes possible the mounting of the motor in any position without the rotor floating in the bearing.

With the new Redmond positive oiling system the AM-4 is guaranteed not to leak oil in all-angle use or in shipment. This design provides an extra large oil reservoir for lifetime lubrication. Positive oiling is achieved through the forced recirculation of the lubricant, which is completely suspended and uniformly distributed in pure wool and nylon wicks.

The basic AM-4, rated at 1½ through 16 watts, is 4-pole, 1550 RPM, 115 volts, 50/60 cycles, and is available in odd voltages and frequencies.

It will pay you to obtain complete information about this new motor by sending for the literature described below.



Send for Complete Performance Data

Write for the "AM-4 Bulletin"—it contains complete information on the design features, dimensions, performance, and operational data.

The Standard of Dependability

Redmond
COMPANY Inc.
OWOSSO, MICHIGAN

ADVERTISED IN
The Saturday Evening
POST

THE BIG NAME IN SMALL MOTORS

Plastic Belts Carry Candies Through Cooling Tunnel, Give Items 'New Look'

WILMINGTON, Del. — New combination of properties," du Pont said. "'Mylar' has provided a new product that is strong, smooth, flexible, crack-proof, non-absorbent, immune to attack by oils and greases, stable under temperature and humidity changes, and a good heat transfer agent.

At the same time, the belts are "providing a 'new look' for many candy and ice cream products."

Fabricated by joining two sheets of du Pont's "Mylar" polyester film with a special white adhesive, this material is being used by more than 100 companies in the candy, baking, and other food processing fields, it was reported.

"The food industry long has needed belting with an unusual

new material," du Pont pointed out.

The material is used also for plaques that convey candies on trays through multi-tier coolers. George Colejezzi, plant engi-

neer, Stephen F. Whitman & Son, Philadelphia, reports that plaques of "Mylar" polyester film have improved the over-all process for chocolate candy manufacture.

The Goldenberg Candy Co., Philadelphia, has used two enrober tunnel belts of "Mylar" since last October. These belts, 32 in. wide and 128 ft. long, are subjected to a continuous temperature of 40° F.

"The development of a suitable conveyor belt for the cooling of coated centers has long been a problem," said I. Harry Goldenberg, president.

"Based on our 10 months' experience with 'Mylar,' I feel that the problem is now well in hand."

A frozen food manufacturer believes belting of "Mylar" will make possible a continuous production line involving freezing of food products at temperatures of -40° F.

Refrigerate Eggs Or Pay Cool Fine

LINCOLN, Neb. — The first Nebraska grocery operator to be prosecuted under the egg up-grading law passed by the 1955 State Legislature and requiring refrigeration of eggs was M. W. Rucklos of Deshler, it was reported by Gould B. Flagg, chief of the Bureau of Dairies and Foods.

The Nebraska grocer pleaded guilty to not keeping eggs under refrigeration and was given a nominal fine in Thayer County Court, Flagg said. The law requires proper refrigeration of eggs in buying stations, storage, and retail cases.

Seabrook Spokesman Sees Frozen Vegetables As Only Store Choice Soon

BRIDGETON, N. J. — The day may not be too far off when the housewife shopping for vegetables will find only frozen vegetables in most stores.

Some vegetables, such as cabbage, do not lend themselves to freezing, but most all the others will be frozen because they'll be cheaper than fresh vegetables, forecasts C. Courtney Seabrook, sales vice president of Seabrook Farms near here, the world's largest vegetable farming and freezing operation.

The trend has started, he says, for one national chain did not buy any fresh peas at all for some of its stores this year, since frozen peas were cheaper.

"Basically our business is farming," Seabrook pointed out. "We preserved vegetables by canning when that was the best process.

"We do it now by freezing. And we'll do it in the future by whatever the best process is then.

"We're experimenting now with preserving foods by atomic radiation, which may become the method of the future. It took the frozen food industry only 25 years to reach maturity, which was much quicker than the canning industry's development period.

"With the speed up in the development of industries these days, it may not take radiation 25 years."

New Stacking Said To Up Frozen Food Sales

CHICAGO — A new method of stacking frozen food packages, called the "shingle" or "tilt" stack, is said to substantially increase frozen food sales.

Instead of stacking the items flat, one atop the other, packages sell much faster if tilted one in front of another at a 45° angle, it was reported.

Result of this method is something like a shingled roof, the top of one package resting half way up the package behind it, leaving top halves of all exposed to view.

Air circulation through the frozen food case is claimed to be much improved by having the packages tilted up. Tests over the last several months in 56 supermarkets have indicated immediate increases in frozen food sales.



Look at Frozen Food DISPLAY from the "IMPULSE" Angle!

YOU NEED GLASS in your refrigerated cases because display triggers the impulse sales. That's why modern refrigerated cases display your merchandise through *Thermopane*® "display windows."

Thermopane combines visibility for more display with insulation for operating economy.

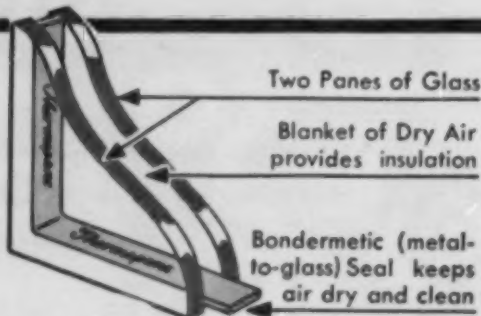
Next time you look at refrigerated cases, see how much more display you get with *Thermopane*. Look for the name imprinted on the seal between the panes. *Thermopane* is used by all leading refrigerated case manufacturers. Libbey-Owens-Ford Glass Co., 608 Madison Ave., Toledo 3, Ohio.

No Organic Material

Only *Thermopane* has the famous *Bondermetic Seal*® which prevents condensation between the panes of glass and keeps out dirt. There is no organic material to deteriorate.



Thermopane
INSULATING GLASS



Two Panes of Glass

Blanket of Dry Air provides insulation

Bondermetic (metal-to-glass) Seal keeps air dry and clean

LIBBEY • OWENS • FORD a Great Name in Glass

For more information about products advertised on this page use Information Center, page 22.

IDEAL
Speed-Freeze
PRODUCTS

BEVERAGE COOLERS AND
INSTANTANEOUS DRAFT
BEER COOLERS.
(With Refrigerated Faucets)

IDEAL COOLER CORPORATION
2953 EASTON AVE. • ST. LOUIS 8, MO.

Over 3,000 Combinations Sold In 60-Day Period In Florida Power Area

MIAMI, Fla. — More than 3,000 combination refrigerator-freezers and 1,200 home freezers were sold during a 60-day activity in this area served by Florida Power & Light Co. ending Aug. 31.

Combined sales totaled \$1,468,130.

Dealers in Suwannee, Clay, Bradford, Baker, Nassau, Columbia, Union county area were tops in both phases of activity with 280% of home freezer quota and 104% of combination refrigerator-freezer quota sold. Second place went to Brevard, Seminole, Indian River dealers with 92% and 194% of quotas, respectively.

Whirlpool-Seeger Ups Regional Offices to 8 In Sales Expansion

ST. JOSEPH, Mich. — Regional sales offices of Whirlpool-Seeger Corp. for marketing RCA Whirlpool home appliances have been increased from five to eight as the first step in a sales organization expansion program, it was announced by John L. Bricker, director of marketing.

New regional sales offices will be located in Kansas City, Cleveland, and Boston. Present regional offices in New York, Atlanta, Dallas, Chicago, and Hollywood will be continued.

The increase in sales offices was made to concentrate services of regional staffs on fewer distributors in anticipation of full appliance line merchandising, Bricker said. Number of distributors served by each regional staff has been decreased from a range of 10 to 21 to a range of six to 14, varying with the region.

Under the new organization Whirlpool-Seeger total field personnel has been approximately doubled in order to service RCA Whirlpool full-line distributors, Bricker stated. Each region is subdivided into two or three districts having three to five distributors. Districts are served by district managers specializing in one product group or sales activity.

The following regional sales managers have been appointed: Joseph E. Conroy, Boston; Harper R. Dowell, New York; Robert Lewis, Cleveland; Austin Schullstrom, Atlanta; Bernard "Pat" Collins, Dallas; John Fellmann, Chicago; Riley N. Stone, Kansas City; and Peter Prussing, Hollywood.

Philco Names Williams To Head International

PHILADELPHIA — Appointment of Harvey Williams, formerly vice president of Avco Mfg. Corp. and general manager of its International Div., as president of Philco International Corp. was announced by James M. Skinner, Jr., Philco president.

He succeeds Sydney Capell who has taken an indefinite leave of absence due to ill health.

Frigidaire Offers Dealers 'Built-In' Demonstration Center for '57

DAYTON — An unusual new showroom demonstration center equipped with built-in selling and display features is being made available to help dealers boost sales of 1957 Frigidaire appliances, according to C. H. Menge, Frigidaire general sales manager.

"Sheer Look" refrigerators, electric ranges, and automatic home laundry equipment featuring the new functional squared-up styling can be displayed as a "family" group, or separately, in three ultra-modern sections.

"A variety of wall coverings, decorative panels, and colors are integrated into the dealer display, suggesting unlimited build-in, blend-in possibilities of the new appliances in any kitchen, old or new," it was stated.

A companion display section for Frigidaire electric wall ovens, surface cooking units,



NEW demonstration center has been designed by Frigidaire to provide method for dealers to show 1957 "Sheer Look" appliances in ultra-modern setting. Center highlights build-in, blend-in application of squared-up product design. This center is comprised of laundry, electric range, and refrigeration center.

and undercounter dishwashers is available for dealers who want to attract new home building prospects or customers planning to remodel and install built-ins.

Individual sections of the center are constructed of permanent materials that easily assemble or knock-down for movement from one display location to another. The center can be arranged in a variety of combinations—as a straight wall display, in an "L" shape, back-to-back with range and laundry units forming an island, or with the refrigerator section alone. Special double-faced companion ex-

tender units are available in matching sizes for refrigerator, range, and laundry appliances.

Easels which are part of cabinet tops unfold to present easy-to-read action-type demonstration cards. A built-in desk with optional courtesy chair is conveniently at hand for demonstration and closing. Literature, order blanks, contract forms, and special demonstration features are only inches away.

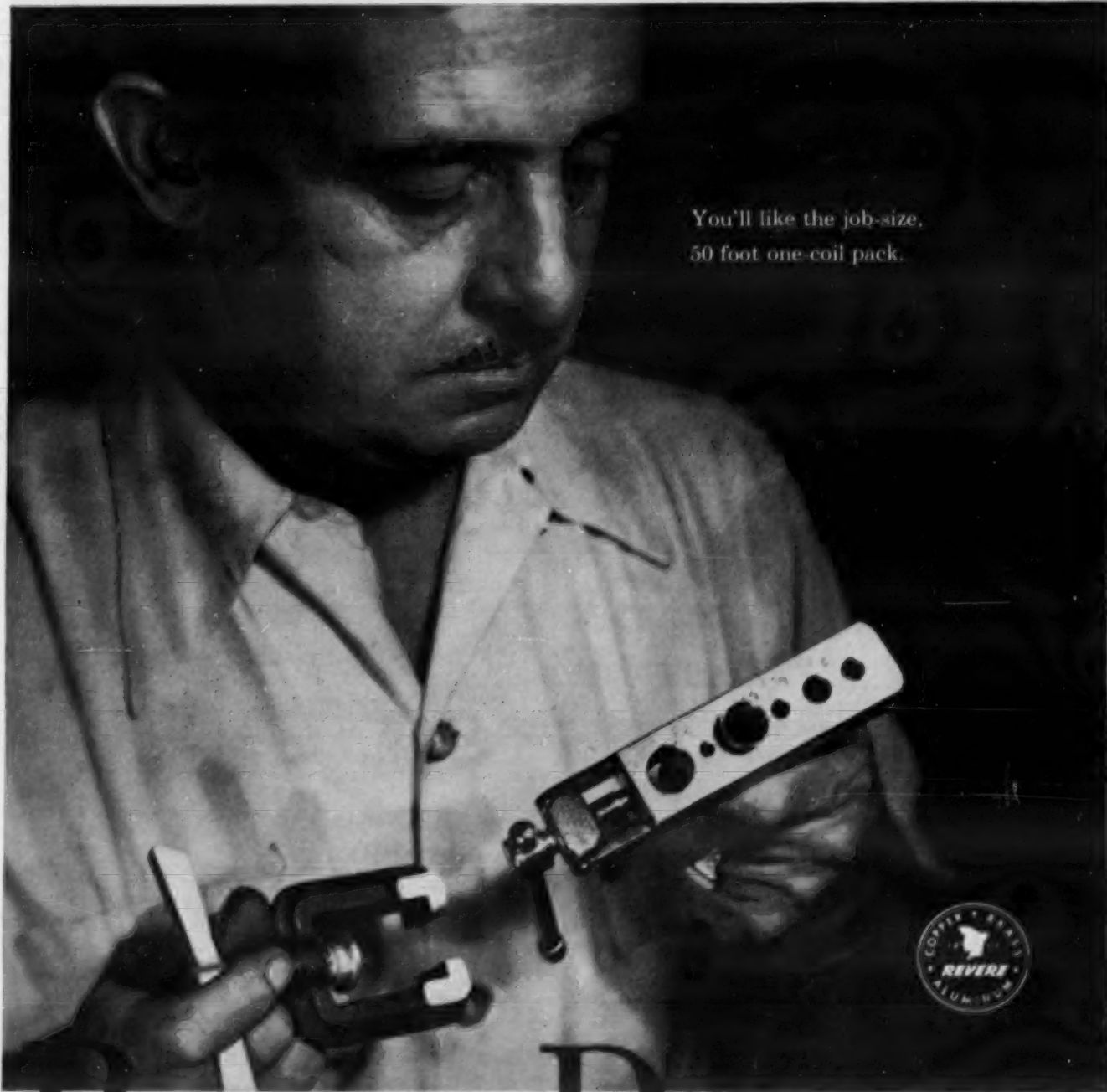
Lighting for each section is provided as a "package," with complete wiring ready to plug in.

To Air Condition Bldg.

GREENSBORO, N. C. — Construction was scheduled to begin in November on a half-million-dollar building for the Wachovia Bank & Trust Co. The three-story bank and office building will be air conditioned.

Because DRYSEAL tube is dead-soft, flares are perfect every time. DRYSEAL bends finger-easy, too. Stays bone-dry, whistle-clean, mirror-smooth. The crimp is double . . . and tube-size to slip easily through fittings. Sizes $\frac{1}{8}$ " to $\frac{3}{4}$ ". Use DRYSEAL on your next job.

Split-free flare



You'll like the job-size, 50 foot one-coil pack.

Revere Dryseal

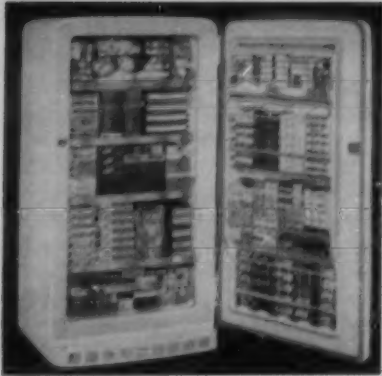
COPPER REFRIGERATION TUBE

You'll find a Revere Distributor close at hand.

REVERE COPPER AND BRASS INCORPORATED, founded in 1801 by Paul Revere

For more information about products advertised on this page use Information Center, page 22.

What's New



KEY NO. F-1210

NEW 1957 model Gibson food freezer holds up to 545 lbs. of frozen food in small floor space. The new upright unit features a slide-out basket for storage of odd-shaped packages, an adjustable shelf, and door racks for food packages and juice cans.



Constant Air Volume Method Developed

KEY NO. F-1211

NEW YORK CITY—A new method has been developed by Anemostat Corp. of America of introducing a constant volume of conditioned air into rooms, offices, and other spaces.

Anemostat's new method makes volume control automatic and continuous. Used with high velocity, dual duct air conditioning systems, variations of total air flow into a living space are eliminated, the firm stated.

Hot and cold air are brought by separate ducts to an attenuator box. Entry of air into the box is controlled by rocket socket valves. The degree of opening of the hot or cold valves is controlled by a thermostat and by a pressure sensitive membrane, both acting through a system of mechanical linkages. The control of air volume is claimed to be extremely close—less than one tenth of an inch wg.

Advantage of the new method is said to be the elimination of varying air volume even though the pressure in the dual ducts may vary widely. If the system becomes unbalanced for any reason, the quantity or volume of air admitted to any office or room is held constant.



'Quick-Bilt' Shelving Can Be Rearranged

KEY NO. F-1212

WELLSTON, Ohio—A new kind of shelving which can be built to fit the user's particular needs recently was announced by Frick-Gallagher Mfg. Co.

Called "Quick-Bilt" shelving, it is said to be easily assembled and rearranged for flexible storage requirements. A wide range of accessories, including label holders, shelf boxes, and peg panels are also available.

Starting with a basic unit, consisting of a base shelf, top shelf, back panel, and two end panels, the user slides in as many shelves as needed, selects the required number of dividers from four sizes, snaps them in place, and the unit is ready for use, according to the company.

Shelves slide in and out easily, it was added. They can be raised or lowered without removing dividers even when loaded.



Water Cooler Unit Has Storage Area

KEY NO. F-1213

MIAMI, Fla.—Precision Metal Products recently introduced a commercial water cooler which combines ice supply, water cooling, glass rack storage, and cutlery tray. It can be furnished as an electric self-contained unit.

Ideal Fixture Introduces Frozen Food Case

KEY NO. F-1214

BROOKLYN—Ideal Store Fixture Co., Inc. here announces the introduction of a frozen food display case with two frozen food display areas topped by a non-refrigerated auxiliary shelf for related items and an open top deck.

Listing merchandising advantages of the case, the company said each line in the bottom shelf holds two cases (48 packages) of merchandise, and offers six exposed surfaces in each line. "Customers enjoy 'Ful-Vue, Easy Reach' shopping, there can be no scattering of items, and reloading is kept to a minimum."

The grocer can promote high-profit specialty frozen food items in the upper refrigerated deck, the company also noted. This shelf is deep enough to display from 12 to 24 packages per line, it was stated.

It was further pointed out that the grocer has room to stock private brands in large quantity next to name brands, affording the customer "a money saving com-

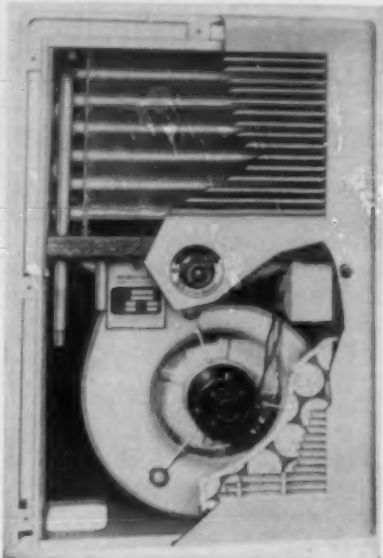


parison which means more profit for the grocer."

A 30-ft. installation is now in service at the Associated Supermarket, Bellerose, N. Y. Mort Selzer, manager, reported a 35% increase in frozen food sales after the first three weeks of operation, the manufacturer said.

The case, model #2DFF, is fully self-defrosting and is available in 6, 8, and 12-ft. sections for single or continuous displays, in full color porcelain (beryl blue), or in white porcelain with blue panel.

Over-all width is 41 1/4 in., height 56 in., frozen food top shelf width approximately 22 in., auxiliary shelf width 9 in.



Flexible Year-Round Conditioner Produced

KEY NO. F-1216

NEW YORK CITY—A new flexible air conditioning system for year-round use in any size or type of home was recently announced by American-Standard Plumbing & Heating Div.

Hot water for heating and chilled water for cooling are supplied from a remotely located boiler and chiller to compact units in each room. Individual room comfort control is possible without zoning and without affecting adjoining rooms, the company pointed out. The unit may be installed complete or just heating or cooling first with addition of the other later. There need be no additional piping, it was added.

"Remotaire" units are made in 150 and 300 c.f.m. capacities. Each is available in free-standing or partially recessed models, the firm noted.

Features claimed by the manufacturer for the system include: piping easily installed and taking little usable area; each unit circulates air only in the room in which it is installed; quiet operation; uniform water temperatures throughout the system; components accessible by removal of front panel; and compact installation.

G-E Develops Portable Halogen Leak Standard



KEY NO. F-1215

SCHENECTADY, N. Y.—Inexpensive quantitative leak checking is now possible with a device developed by General Electric's Instrument Dept., the company reports.

Called the "Halogen Leak Standard," it is a portable instrument for the precise calibration of halogen-type leak detectors.

The new equipment features accurate leak size determination of +10% full scale. Easy to use, the new leak standard is plugged in to a 110-120 v., 50-60 cycle power supply. After power is turned on, the standard is adjusted to the desired leak rate value and the leak detector probe is inserted firmly into the gun fitting of the standard. The output indicator then shows the appropriate reading.

There are two scales on the leak rate indicator. The inner scale indicates the leak rate in ounces halogen per year. The outer scale, marked in arbitrary units from

0 to 100, is used only during the calibration of the standard.

A halogen vapor system and a filtered air system comprise the new leak standard. The halogen vapor system consists of a vapor tank, increase valve, manifold, decrease valve, ballast tank, gauge, and standard leak assembly. Tanks supply halogen under pressure and valves control the pressure in the ballast tanks. A calibrated and adjustable leak is provided.

The filtered air system has two vibrator-type pumps and two air filters. As filtered air is fed to the divider assembly, it carries with it the halogen vapors escaping through the standard leak. Excess air escapes through an air vent.

To facilitate occasional accuracy checks of the Halogen Leak Standard, a calibrator is available. Complete with accessories, the calibrator can "zero in" any point on the scale in 10 minutes.

The device weighs 13 lbs. net, and is 7 1/2 in. wide, 9 in. high, and 16 in. deep.

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

Products Advertised

(list name, page, and issue date)

What's New or Current Literature Available

Key No.	Key No.
Key No.	Key No.
Key No.	Key No.
Key No.	Key No.
Key No.	Key No.

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MAIL THIS FORM TO

AIR CONDITIONING & REFRIGERATION NEWS
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450 W. FORT ST.

DETROIT 26, MICHIGAN

We're SPECIALISTS in

REFRIGERATION

AIR CONDITIONING

ELECTRIC MOTORS

PARTS and Supplies

WE SAVE YOU MONEY because we're specialists, with the largest selection in the world—over 10,000 items—at lowest prices. They're all illustrated, priced and described in our newest HARRY ALTER DEPENDABOOK—"the standard of the trade."

WHOLESALE ONLY

Write on your letterhead for the DEPENDABOOK

The HARRY ALTER CO., Inc., 1717 S. Wabash Ave., Dept. A, Chicago 16, Ill.

or visit branches

134 Lafayette Street
New York 13, N. Y.

122 Parkhouse Street
Dallas 7, Texas

Bldg. B, Unit B, 600 Stewart Avenue, S. W.
Atlanta 30, Ga.



Large Volume Cabinet Fan Introduced

KEY NO. F-1217

LA CROSSE, Wis.—A new, large volume cabinet fan for operation at low noise level and space-saving installation in buildings with low ceilings has been announced by the Trane Co.

Suited for industrial and commercial applications, the cabinet fan can be used in air moving systems for supply, exhaust, or recirculation of air. It is available in 12 sizes ranging from 600 to 34,500 c.f.m. with outlet velocities varying from 1,000 to 2,600 f.p.m.

Easily installed over doorways, in closets, or other out-of-the-way places, the fan is especially suited for use in schools, office buildings, industrial plants, laboratories, churches, gymnasiums, and similar applications, the firm said.

One and two-fan models are available, with two-fan units mounted side-by-side on a single shaft to maintain a flat, compact cabinet. Bearings, drives, and motor are mounted outside the cabinet for easy access.

Optional equipment includes filters, mixing box, and dampers. Filters are permanent or throw-away type.

SALES ENGINEER AIR CONDITIONING REFRIGERATION

A large and progressive Chicago Wholesaler offers an exceptional opportunity for an aggressive and successful salesman. Established accounts in local area. Drawing acct., profit sharing and other benefits.

Write BOX A5689, Air Conditioning & Refrigeration News.

OUT FRONT for merchandising perishables...

Climaxing seventy-five years of leadership in the commercial-refrigerator industry, the all-new Warren Diamond Jubilee Series of Master Merchandisers is designed to keep sales and profits going up. For each perishable department in the progressive food store, there is a superior new Master Merchandiser... handsomely styled and scientifically engineered for maximum capacity and more display.

For complete information, write, wire or call

Warren Refrigerators
P.O. BOX 1436, ATLANTA 1, GA.



Self-Contained Dehumidifier Has Humidistat

KEY NO. F-1218

MILFORD, Mich.—Skuttle Mfg. Co. here recently introduced a new self-contained dehumidifier that controls relative humidity through a humidistat.

Model 400 is said to be easily mounted on any plenum, or can be installed directly in the warm air trunk line because it furnishes its own heat through a 650 w. electric element.

It is wired in parallel with the

blower motor or through the fan switch to assure evaporation only when the blower is running, the firm said. Use of its own heat element gives as much evaporation as 27 qts. in 24 hours independently of the furnace's bonnet temperature, it was added.

Transformer relay is mounted on the furnace casing using regular sheet-metal screws. Low voltage wiring is used between relay and humidistat.

Features include porcelain-coated steel chambers, brass, nickel, and chrome-plated float valve parts, and blown-glass float, the firm continued. No evaporator plates are needed.

Pre-Formed Duct Lining Said To Cut Costs

KEY NO. F-1219

NEW YORK CITY—Insul-Coustic Corp. here recently introduced a new duct lining claimed to cut labor costs and provide effective insulation against heat and sound.

Pre-formed at the factory, the molded fibrous glass liner fits rectangular or circular ducts in many sizes and thicknesses in 4-ft. lengths.

Lightweight, "Insul-Coustic" liner doesn't have to be cut to size, according to the producer, and there's no need for pins, clips, or adhesive. Interior surface is lined with open-weave glass cloth to prevent surface erosion and cut friction resistance to air flow.



Said to eliminate "duct whistle," the material absorbs sound. K factor is .25 at 75° mean temperature. The duct liner will not corrode or rot, is moisture resistant and insect proof, resists deformity and rupture, the company stated.

Soft Drink Vendor Added to La Crosse Line

KEY NO. F-12110

LA CROSSE, Wis.—La Crosse Cooler Co. recently announced addition of the "Bev' Serv 90" to its line of soft-drink vending machines.

Offering visual selection of nine separate flavors, the new model requires 4 sq. ft. of floor space, it was pointed out. The upright vendor is fully adjustable for all bottle sizes from 6 to 12 oz.

It has a maximum dispensing capacity of 90 drinks with pre-cool provision for 15 more, La Crosse declared.

Individual trays dispense the nine flavors. All flavors are visible through a full-sized triple-paneled glass door. The refrigeration system is a sealed capillary tube type using "Freon-12" with the entire unit replaceable in the field, the company said.

Condensate pan is equipped with evaporator plate, eliminating need for plumbing connections. Construction is all steel with 2½ in. of spun-glass insulation on top, sides, and bottom, it was explained.

Over-all dimensions are about 30 by 61 by 20 in., the manufacturer stated.

Heater Features Safety Barrier

KEY NO. F-12111

ELIZABETH, N. J.—A new line of safety-type fuel oil heaters featuring 100% counterflow, a safety barrier of heat transfer liquid between oil and water, and no electric warning system was recently announced here by Davis Engineering Corp.

"Paracoil Thermofilm" heaters using extended surface on heating tubes and straight tube construction, oil in shell, and water in tubes, are claimed to contribute to improved heat exchange through the unit.

Available in five sizes to cover all normal capacities, heater installation requires no electric wiring, the company further stated.

Redmond
MICROMOTORS
One of largest stocks
in the world!
FACTORY DISTRIBUTORS
MARVIN L. "FERGIE" FERGISTAD
CYCLO-FREEZE CORP.
6318 Cambridge, Mpls. 16, Minn.
West 9-6794

Pushbutton Cooler Delivers Hot or Cold Water

KEY NO. F-12112

EAST SPRINGFIELD, Mass.—Westinghouse Electric Corp. recently developed a "Hot and Cold" water cooler that has an accessory storage section for cups and packets of instant coffee, chocolate, and soups.

Capable, the firm says, of delivering steaming hot or ice cold water, the new unit is designed for use in offices, factories, shops, motels, etc.

Electrically operated, requiring no plumbing, the unit resembles a standard water cooler, it was explained. However, it has two pushbutton water taps, one each for hot and cold. Hot water is produced in a 2-qt. rapid heating unit which dispenses 190° water. The "Corox" hot water heater is a 1,000 w. 60 cycle immersion type in a monel metal tank.

Cold water is produced with a hermetically sealed ¾-hp. compressor, the company said. The accessory drink file fits on the side of the cooler and holds 100 instant

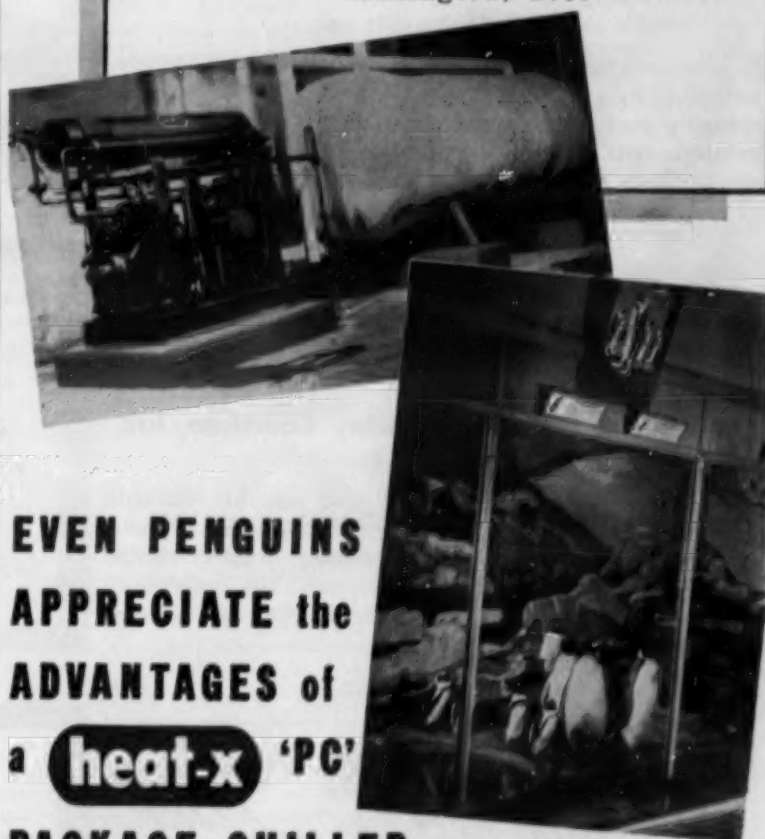


drink packets in four separate dispenser channels. A supply of plastic lined paper cups is available from a central cup dispenser. The unit carries a suggested list price of \$280.70 and the drink file \$10.50.

CASE HISTORY

Another Space-Saving Application of Heat-X 'PC' Package Chillers.

National Zoological Park
Washington, D.C.



EVEN PENGUINS APPRECIATE the ADVANTAGES of a **heat-x 'PC'** PACKAGE CHILLER

Only with a Heat-X 'PC' Package Chiller could the desired capacity be obtained while allowing sufficient space for the required 400 gal. storage tank.

Here, chilled water maintains the penguin pool at 35° F... is also used to hose down cage floor and maintain cage temperatures at approximately 40° F.

Patented Inner-Fin® design of 'PC' Package Chillers makes possible this maximum capacity with minimum bulk. All-copper construction of water passages eliminates any corrosion problem... assures continued satisfactory operation.

Write for complete information on Heat-X 'PC' Package Chillers in 2 HP through 100 HP models.

HEAT-X, Inc.
BREWSTER • NEW YORK

53 MONDAYS IN 1956

The 52nd and 53rd issues of the NEWS will be combined into one, the issue of December 24. No issue December 31. Be sure to watch for this special combination which will include the Annual Index of key editorial material for the entire year.

Pennsalt To Acquire Delco Chemicals, Specialty Cleaning, Paint Stripping Compound Producer

PHILADELPHIA — The boards of directors of Pennsalt Chemicals and Delco Chemicals, Inc., Los Angeles, have approved a plan under which Pennsalt will acquire Delco, Pennsalt President William P. Drake has announced.

The acquisition will be accomplished through an exchange of stock.

With a new main plant and office located in Los Angeles and another recently constructed plant at Dallas, Texas, Delco's major activities are the manufacture and sale of organic and inorganic specialty cleaning and paint stripping compounds for the aircraft industry and for general maintenance purposes.

Following transfer of ownership and control, Delco's operations will continue under the immediate direction of its president, Lyle Harbour, and its vice president and general manager, A. F. Slover, and their associates.

Delco's activities will become an integral part of the Chemical Specialties Div. of Pennsalt under General Manager Albert H. Clem.

Lance L. Simmons of American Blower Dies

DETROIT — Lance L. Simmons, 57, executive engineer of American Blower Corp., died in his sleep recently. Previously, he had suffered three coronary thrombosis attacks.

A past president of the Heating & Cooling Coil Mfrs.' Association and a member of American Society of Refrigerating Engineers, Simmons formerly held positions with the firm as manager of the air conditioning department, and sales engineer in the industrial department of the Detroit sales office, it was explained.

To Condition Bldg.

MEMPHIS — Bids have been received and were under advisement for air conditioning the dental building of the University of Tennessee, it was recently announced.

I switched to Typhoon

says S. G. Taylor, Taylor Refrigerator Co.
Des Moines, Iowa

"... because we found out that Typhoon gives full cooperation all along the line... from the president's office to the shipping dock. We particularly like the warm, friendly atmosphere that exists between the Typhoon organization and us. They go all out to serve us."



I switched to Typhoon

says D. M. Cawthon, Dudley Cawthon, Inc.
Miami, Florida

"... because I was looking for a quality line that was both complete and flexible. After going through the Typhoon factory, I saw for myself that the quality of materials and workmanship put into Typhoon equipment could only result in a superior product... and make friends and satisfied customers for us."



I switched to Typhoon

says E. W. Farr, Jr., Bell Refrigeration Corp.
Cleveland, Ohio

"... because we needed a reliable 'on time' delivery schedule and we found we could depend on Typhoon's shipping promises. Since we became members of the Typhoon family, our air conditioning business has been placed on a more personal and a more profitable basis."



Take a tip from these money-making distributors. Send in the coupon for information on a Typhoon direct factory franchise.

TYPHOON

Typhoon Air Conditioning Company
Division of Hupp Corporation
Brooklyn 15, New York
Specialists in Air Conditioning Since 1909

Typhoon Air Conditioning Company
505 Carroll St., Brooklyn 15, N. Y.

Tell me about a Typhoon franchise in my territory. Send me Information Bulletin A7

Name.....

Firm.....

Address.....

City.....Zone.....State.....

Government Contracts

SYNOPSIS OF PROPOSED PROCUREMENT

NOTICE TO SMALL FIRMS

Purchasing Division, Schenectady General Depot, U. S. Army, Schenectady, N. Y. The following items are procured under IFB QM-30-127-57-127-Bid Opening 4 Dec. 56.

DISPLAY CASE, open produce, self-service type, front storage, mechanically refrigerated, display length 12 ft., depth 42 in., front height 33 in., display capacity 23 cu. ft., storage capacity 28.2 cu. ft., Model Y-121DV with a superstructure Model YV-12B1 as follows: 110 volts, 50 cycle, 1 phase, a.c. for lights and fans, and compressor to operate on 230 volts, 50 cycle, 1 phase, a.c., 2 ea.—110 VOLTS, 60 cycle, 1 phase, a.c. for lights and fans, and compressor to operate on 230 volts, 60 cycle, 1 phase, a.c., 12 ea. Export pack.

ARMY

Corps of Engineers, U. S. Army, Office of the District Engineer, Norfolk District, Foot of Front St., Norfolk 1, Va. CONSTRUCTION OF CENTRAL HEATING PLANT, Fort Eustis, Va.—Job—IFB Eng 44-110-57-10—Bid Opening 6 Dec. 56.

Corps of Engineers, U. S. Army, Walla Walla District, Bldg. 602, City-County Airport, Walla Walla, Wash. CONSTRUCTION OF COLD STORAGE BLDG., Pavement, and utilities at Glasgow AFB near Glasgow Valley County, Mont.—Job—IFB ENG-45-164-57-14—Bid Opening 8 Dec. 56.

Corps of Engineers, U. S. Army, Office of the District Engineers, Foot of Front St., Norfolk, Va. CONSTRUCTION OF CENTRAL HEATING PLANT, Ft. Eustis, Va. (A) Central Heating Plant incl. storage and handling facilities, electrical work, plumbing, and boiler equipment. (B) Hot water and steam distribution system. (C) Site and utility work—Job—IFB Eng 44-110-57-10—Bid Opening 6 Dec. 56.

NAVY

District Public Works Office, Eleventh Naval District, San Diego, Calif. INSTALLATION OF ADDITIONAL HEATING IN VARIOUS BLDGS., consisting of providing and installing gas fired space heaters, including cutting and patching, piping, and electrical work, Marine Corps Base, Camp Pendleton, Calif.—Deposit of \$25 required for plans and specifications—Job—IFB 744/56B—Bid Opening 5 Dec. 56.

Purchasing Office, Marine Corps, Camp Pendleton, Calif. BOILER, HOT WATER HEATING, Oil Fired, vertical, fire tube, package type, Spec. MIL-B-18897A—20 ea.—IFB 681-198-58—Bid Opening 27 Dec. 56. Bid sets must be requested not later than 10 days from date of publication of this Synopsis.

General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pa. COOLER, DRINKING WATER, BUBBLER TYPE, Spec. FED-OO-C-566C—613 ea.—IFB-155-1052-57B—Bid Opening 17 Dec. 56.

Naval Supply Depot, Seattle, Wash. The following items are procured under IFB 406-107-57B—Bid Opening 4 Dec. 56. ELECTRIC RANGE, 41 in. size, S&E to Norge Automatic Electric Range, Model E-455, 61 ea.—DRYER, Electric, Clothes, S&E to Bendix Model DFE-D, 31 ea.—REFRIGERATOR, ELECTRIC, S & E to Kelvinator 1956 Model K42Z-11, left hand door, 31 ea.—RIGHT HAND DOOR, 30 ea.

AIR FORCE

Purchasing and Contracting Office, Scott Air Force Base, Ill. ADDITION AND MODIFICATION TO CENTRAL HEATING PLANT at Belleville, Ill.—Job—IFB 11-601-57-25(B)—Bid Opening 5 Dec. 56.

Purchase Branch, Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. FREON F-11 (Trichloromono-fluoromethane) or equal, in accord with Federal Spec. BB-F-671A, dated 3 July 52—500,000 lbs.—IFB 33-616-57-21—Bid Opening 7 Dec. 56.

GENERAL SERVICES ADMINISTRATION

General Services Administration, Region 5, 575 U. S. Courthouse, 219 S. Clark St., Chicago, Ill. DEHUMIDIFIER 2001 Group Buildings at Green River Ordnance Plant, Dixon, Ill.—Job—IFB D&C 107—Bid Opening 12-17-56.

General Services Administration, Business Service Center, Region 3, 7th & D Sts., S.W., Washington 25, D. C. DIFFUSER, AIR, CEILING, complete with volume control and equalizing damper (Agitair), Type C.S.F., various sizes—various quantities—IFB R2H-81900-R—Bid Opening 12/11/56.

General Services Administration, Region 10, Business Service Center, 900 First St., Seattle 4, Wash. INSTALLATION OF REFRIGERATOR EQUIPMENT, Federal Civil Defense Administration Warehouse Yakima, Wash.—Job—IFB CR-10-603—Bid Opening 12-5-56.

NEW Designs and Features! P-H REFRIGERATORS and FREEZERS



MODEL P 40-2
Self-Contained



MODEL SA 15-15
Two-Temperature
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MODEL P 66-3
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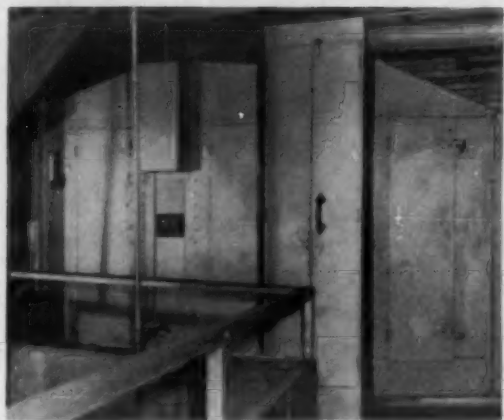


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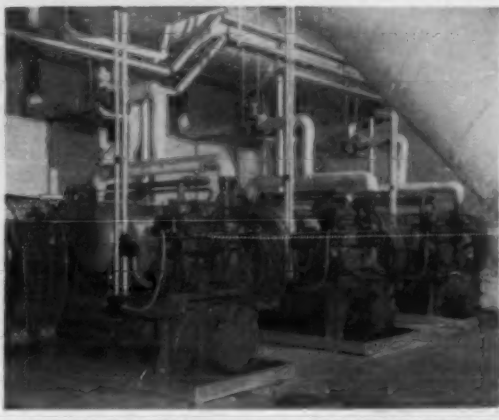
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Refrigeration System Provides 'Absolute' Control over Cupola Blast Air Moisture Content at 40°



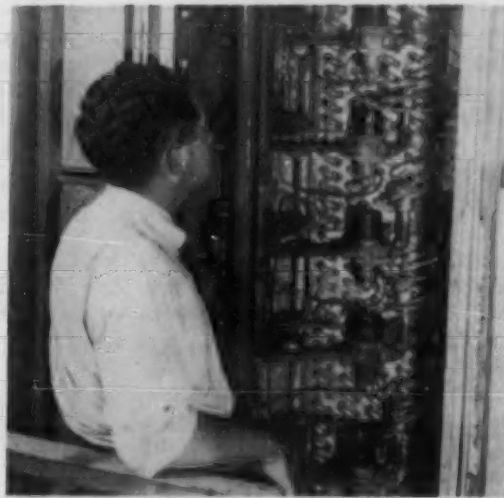
HEART of the dehumidifying system at Delco-Remy Div. of General Motors Corp. plant in Anderson, Ind. is contained in this sheet metal shell. Within it, l. to r., are the air filter, cooling coils, and condenser room.



FOUR Frigidaire refrigeration units have a total capacity of 80 tons. Air duct, discharging dehumidified filtered air to the cupola is at top foreground.



THIS mechanical "brain" controls the refrigeration units used to dehumidify cupola air. It can be set to maintain any temperature.



SERIES of solenoid valves, located for easy access, are used to control the refrigeration coils in the condensing room.

Dehumidifying Permanent Mold Air Prevents Surface Porosity In Casting, Reduces Cost

ANDERSON, Ind.—For years gray iron castings poured in the foundry of the Delco-Remy Div. of General Motors Corp. here had been susceptible to flaws caused by gas in the molten metal, because castings there are made in permanent molds.

Venting gas is much more difficult from permanent molds than from sand molds. Trapped, and unable to escape through the solid mold, any hydrogen gas present in the molten metal can cause surface porosity in the casting.

In studying the problem, engineers noted that defective

castings from surface porosity were considerably more numerous during the summer months, than during colder periods. A closer look at this finding soon proved that the scrap loss rose in direct proportion to the relative humidity of the atmosphere—which is high during the summer months in Indiana.

Further investigation disclosed that excessive moisture in the humid air was the cause of the trouble. The moisture was blown into the molten metal with the cupola blast air. The moisture immediately was broken down into hydrogen and oxygen, and the hydrogen was

absorbed in a gaseous state, into the metal.

To overcome this problem, engineers from Frigidaire were asked to assist in devising a method of dehumidifying the cupola blast air before it was fed into the cupola.

The result is a refrigeration system which is said to provide absolute control over the moisture content of the cupola blast air. It cools the blast air to a constant temperature of 40° F., officials said.

This particular temperature was chosen because air at a temperature of 40° F. cannot hold more than three grains of moisture per cubic foot, which is not enough to affect the castings adversely, it was explained.

The system consists of a sheet metal shell through which outside air is drawn by the cupola blower. Inside the shell the air passes through an automatically oil-cleaned filter and into the cooling chamber. Here, the refrigerating coils cool it to the required 40° F.

Next the air is taken through a condensing room where all but three grains per cubic foot of the moisture falls to the floor and is drained away. The dried, filtered air then is forced through a duct into the cupola, where the metal is being melted. The entire movement of air is accomplished by the cupola blower.

The refrigerator compressors—four standard Frigidaire units with a total capacity of 80 tons—are located in a dust-

proof room for the protection of the compressor motors. They are regulated by an automatic control unit which can be set to maintain any temperature.

When in operation, the system can dehumidify up to 7,500 c.f.m., it was stated. On an average humid summer day it will precipitate as much as 9 lbs. of water per minute from the outside air.

It is completely automatic, and combined operation and maintenance costs have averaged the extremely low figure of only \$.70 per operating hour, it was pointed out. Adding to the economy of the setup is the fact that water precipitated from the air is pumped out and re-used in dust-suppression sprays atop the cupolas.

The unique use of refrigeration in this situation not only solved a troublesome problem in the foundry field but, according to Delco-Remy process engineers, paid for itself in scrap savings the first year.

Private Nuclear Reactor To Test Food Preservation

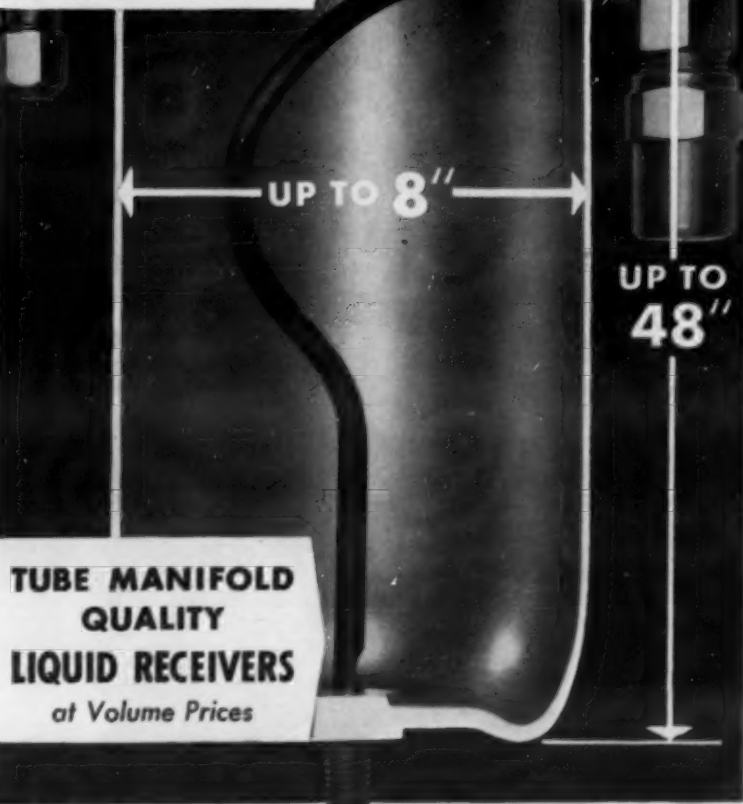
COLUMBUS, Ohio—Completion, at Battelle Institute, of the nation's first privately owned Nuclear Research Center was announced here by Dr. Clyde Williams, president and director of Battelle.

A one-million-watt reactor added to the center will be used in research on preservation of agricultural goods, chemistry of petroleum, sterilization of pharmaceutical products, and improvement and development of many chemical, glass, plastic, ceramic, and metallic products and processes.

R. S. Demmler Is Dead

PITTSBURGH—Robert Stifel Demmler, 72, secretary-treasurer of Demmler Bros., local heating and air conditioning firm, died recently at his home, RD 1, Evans City, Butler county.

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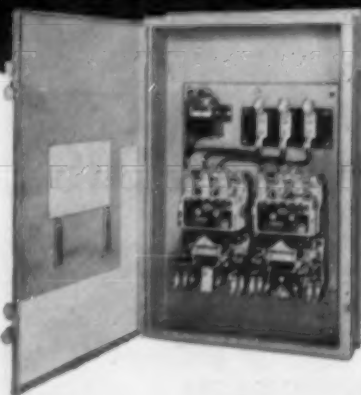
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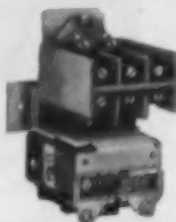
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Refrigerant Piping

This is the fourth article in a series by Mr. Lindsley covering some fundamentals in the installation, service, and maintenance of refrigeration and air conditioning systems.

By E. D. Lindsley, Mgr. of Technical Section,
Air Conditioning & Refrigeration Service Div.,
Worthington Corp., Ampere, N. J.

Purpose of this discussion is to try to point out some precautions to be taken, which can affect the operation and life of the compressor.

When compressors are operated at the higher speeds, proper lubrication must be maintained at all times. The proper

sizing and installation of piping will help in the return of oil and the reduction of damage to compressor from burned out bearings, scored cylinders, and broken valves.

We know that many systems that were carefully designed as to the component equipment sizes have given continued trouble in operation because of poorly designed or improperly installed refrigeration piping.

The problems of piping involve much more than the installation of piping, to carry the liquid refrigerant to the evaporator and the refrigerant gas back to the compressor. The discharge, suction, and liquid lines must be properly sized to avoid excessive pressure drop. At the same time, the suction and discharge lines must be sized to provide sufficient velocity to return oil. This discussion covers discharge lines, suction lines, and liquid lines.

DISCHARGE LINES

In many installations today, remote condensers are used, and multiple compressor units are connected into a single refrigeration system. On these systems, the discharge line should be piped to avoid excessive vibration, provide against

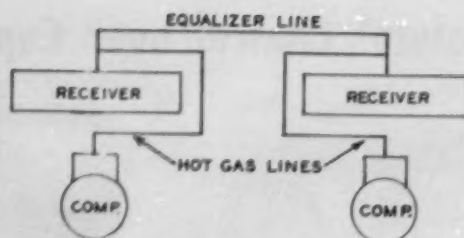


FIG. 1—Hot gas line arrangement with equalizer piping short.

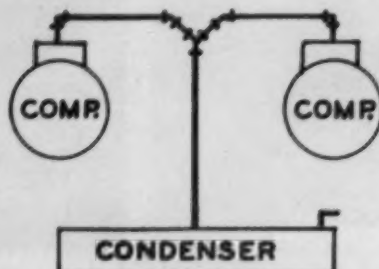


FIG. 3—Discharge line Y arrangement with two or more compressors.

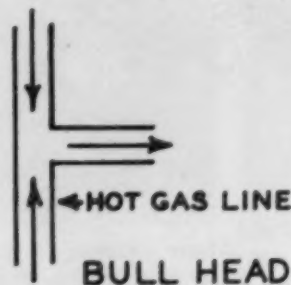


FIG. 4—Hot gas lines "bullheaded."

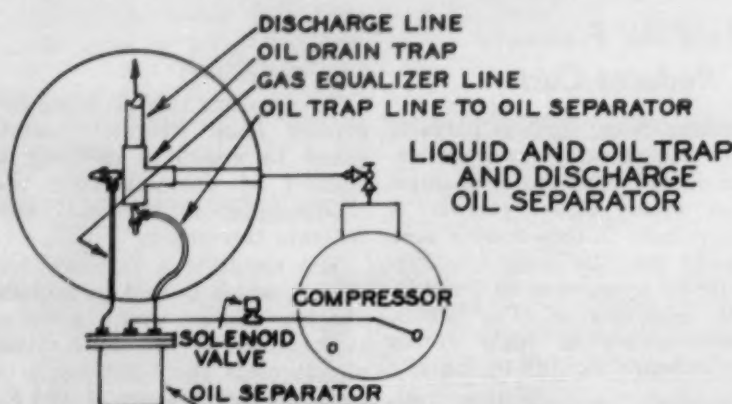


FIG. 5—System where discharge line has vertical rise greater than 6 ft. but not greater than 25 ft. should be equipped with oil drain traps.

the entrainment of oil and lines trapped where necessary, to protect the compressor.

Care should be taken when sizing the discharge lines, to maintain a minimum velocity for oil return. For Refrigerant 12 discharge lines, 2 p.s.i.g. is the usual recommended maximum pressure drop, with a minimum velocity of 1,500 f.p.m. in vertical lines, and 750 f.p.m. in horizontal lines, to maintain proper oil movement. Manufacturers' charts should be referred to, for pipe sizing.

When condensing units are connected in parallel, care should be taken if each unit has its own receiver. The hot gas lines should be arranged so that the equalizer piping between them is as short and as near the receiver as possible. (See Fig. 1). The equalizing line should be at least as large as the discharge line of a single machine.

If two or more compressors are to be used with one condenser, the discharge line should

be looped into the main header or connected to the main hot gas line in a Y and never bullheaded. (See Figs. 2 and 3).

When hot gas lines are bullheaded as in Fig. 4, a turbulence can be set up which may cause pulsations in the piping, can result in noise and leaks.

On systems where the discharge line has a vertical rise greater than 6 ft., but not greater than 25 ft., they should be equipped with oil drain traps (see Fig. 5). If discharge line has rise greater than 25 ft., use full size oil separator.

On multiple compressor installations where the compressors are parallel, due to difference in temperature in various parts of the system, a discharge line check valve is recommended

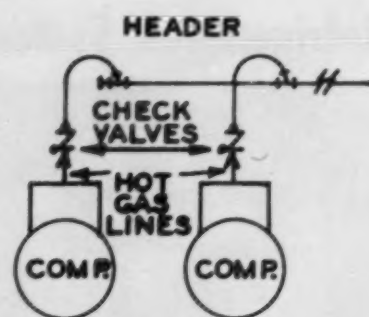


FIG. 2—Discharge line hook arrangement with two or more compressors.

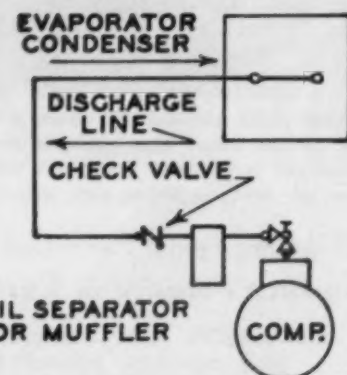


FIG. 6—Check valve should be installed 5 ft. or more from compressor but never between oil separator and compressor.

to prevent the back flow of gas during compressor shut-down.

Liquid condensing in the compressor heads could cause serious damage when the compressor starts. The check valve should be installed 5 ft. or more from the compressor, but never between the oil separator and compressor. (Figs. 2 and 6).

On systems where evaporative condensers are used, we again have the temperature difference affecting the refrigerant in the discharge side.

To prevent difficulties from this condition, it is recommended that a check valve be installed in the hot gas line, to prevent the back flow of gas during shut-down of the compressor (See Fig. 6).

To help eliminate the troubles that are sometimes caused from gas pulsations in the hot gas line to an evaporative condenser, it is recommended that a muffler or oil separator be installed as close as possible to the compressor, to stop the gas pulsations. (See Fig. 6).

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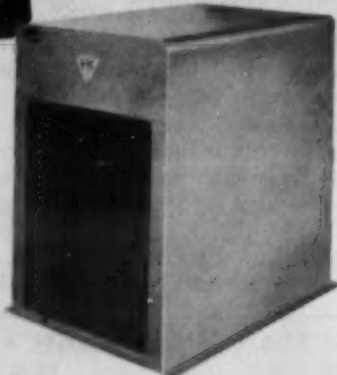
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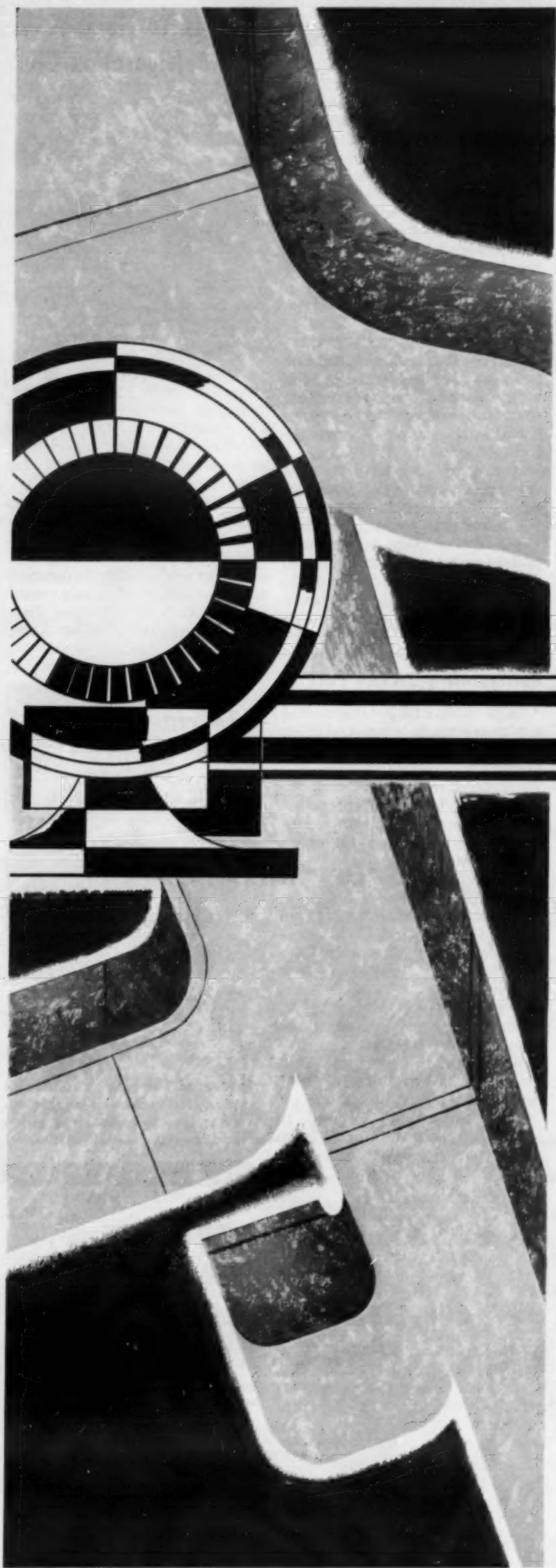
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**Beginning with the February 4 issue—
Once-a-Month
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Air conditioning and refrigeration people are doing more and more heating work. Heating people are getting into air conditioning. And the term, as well as function, of "air conditioning" is coming into its own as treatment of air "so as to control its temperature, humidity, cleanliness, and distribution—."

So by popular demand, AIR CONDITIONING & REFRIGERATION NEWS will provide readers more and more news and information on all phases of the business.

The new Heating Section, to appear in the first issue of every month starting February 4, 1957, will serve to concentrate and dramatize news and feature articles on all aspects of heating. Editorially, NEWS readers will be provided a comprehensive view of what's going on in heating.

In addition to the once-a-month Special Heating Section, all weekly issues will carry timely news of the field. Hence weekly heating news coverage will continue as an exclusive service of AIR CONDITIONING & REFRIGERATION NEWS.

Heating manufacturers are invited to take advantage of this new force in the business. Act now! Plan your advertising for this new Heating Section—get maximum reader interest.

The February 4 issue will provide double impact. In addition to kicking off the new Heating Section, it is also the Pre-Show issue for the Heating and Air Conditioning Exposition, Chicago, February 25 through March 1, 1957.

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Beverage Dispensing Equipment Catalog Groups Similar Items, Includes Prices

GREAT NECK, N. Y.—After more than four years of development and preparation, Hedeman Products, Inc. here announces the completion of a 400-page, full-color catalog of equipment "which is of interest to everyone who installs, maintains, or builds beverage dispensing equipment."

According to Robert M. Hedeman, president of the company, this catalog (V-1) eliminates cross-reference by grouping together all products of a similar function. A description of every item is given together with the product illustration and a catalog number.

"The former practice of high list prices which are reduced by a series of chain discounts has been eliminated," it was stated. "All discounts have been pre-calculated and interpreted into net costs and are given directly opposite each item. Separate price lists are not needed."

Color has been employed functionally in both product design and catalog design. It is believed that color-coding allows little chance of using a component in the wrong application.

With this catalog as a guide, Hedeman Products believes that anyone can install, maintain, repair, or redesign any beverage dispensing system in any type of location—either manually operated or automatic dispensers.

A unique feature is claimed

for this catalog. This feature permits the buyer to determine his net cost of a factory prefabricated and tested hose assembly prior to ordering. A net exact cost can be calculated and an order placed by part number for any hose assembly, in any length, with any fitting combination, in any quantity of assemblies.

In addition, postage-paid air-mail order forms are included to save time.

Howard Names Outlet In Florida-Georgia

PHILADELPHIA — Appointment of Morgan-McCann & Associates, Inc., Sarasota, Fla., as direct factory representative for the sale of Howard products in the Florida-Georgia territory has been announced by Howard Refrigerator Co., Inc.

The Morgan-McCann group, which has formerly served in positions with the Liquid Carbonic Refrigeration Div., calling on the ice cream trade, and with many years of experience in the refrigeration equipment line, will continue its activities in contacting Howard dealers and distributors to instruct them in the sale of Howard products, the announcement said.

Mr. McCann will be personally in charge of training and supervising of newly-appointed sales outlets, it was stated.

FTC Charges 3 Dairy Firms Acquired All or Part of 251 Others Since '51

WASHINGTON, D. C.—The Federal Trade Commission recently issued separate complaints against three of the largest members of the nation's dairy industry, charging them with violating the anti-trust laws by acquiring all or a part of the stocks or assets of a combined total of 251 dairy companies since 1951.

Charged with violating both Sec. 7 of the Clayton Act (anti-merger law) and Sec. 5 of the FTC Act (prohibits unfair competitive methods) are: National Dairy Products Corp., New York City, said to be the industry's largest member; The Borden Co., New York City; and Beatrice Foods Co., Chicago.

Each of the complaints charges that the acquisitions represent a "constant and systematic elimination of actual and potential competitors," and as such constitute an unfair

method of competition.

The complaints state, among other things, that because of their great size and financial resources and the extent of their product and geographical diversifications, the companies have the power to extend numerous benefits to customers and potential customers.

"Among these," the FTC said, "are the following:

"Make non-interest bearing loans and loans of equipment or facilities; sell equipment or facilities at prices which are less than the market value; make substantial payments in the form of gifts. . . ."

The complaints are separate from those filed some time ago by the FTC against eight major ice cream companies, including these three. The latter complaints primarily involve alleged unfair competition through the giving or leasing of refrigeration equipment to retail outlets.

Pepsi-Cola Approves 2 Upright LaCrosse Vendors

LA CROSSE, Wis.—La Crosse Cooler Co. said it recently received word from Pepsi-Cola Co., Long Island City, N. Y., that both its "Bev'Serv 12" (model 117) and "Bev'Serv 90" visual selective upright vendors have been tested and are now approved for offering to the company's bottler family.

It was also stated that La Crosse participated in Pepsi's most recent motor caravan. During this time La Crosse had the opportunity of presenting the equipment to a great many bottlers and was "greatly enthused over the nice response," the company said.

Vilter Names Harvey Sales Representative

MILWAUKEE — The Vilter Mfg. Co. announces the appointment of Walter H. Harvey as a sales representative.

Harvey will work out of the firm's Cincinnati office with Cincinnati District Manager L. H. Fischer.

Harvey has a record of over 20 years' experience in refrigeration and air conditioning. Prior to joining Vilter, he served as assistant chief engineer of the French Bauer Dairy of Cincinnati. He also spent nine years as division chief engineer of National Dairy Products Co. of Cincinnati.

Weber Showcase Omits Second Dividend Payment

LOS ANGELES — Weber Showcase & Fixture Co., Inc. has again omitted payment of the quarterly common stock dividend ordinarily declared about this time.

Directors feel that dividends should be kept at a very minimum until bank loans are reduced, it was explained by Karl Weber, president. The dividend omission is the second in a row for the firm, it was reported.

A usual quarterly dividend of 31¼ cents a share was declared on the preferred stock, payable Jan. 2 to stock of record Dec. 15.

Maseritz To Head York Ice & Refrigeration Div.

YORK, Pa.—Bern Maseritz has been named sales manager—Ice & Refrigeration Equip-



B. Maseritz

ment, it was announced by R. E. Cassatt, manager of sales, Commercial Div., York Corp., a subsidiary of Borg-Warner Corp.

Maseritz will be responsible for all sales activity on York automatic ice makers and refrigeration equipment. In co-operation with York district managers-commercial, he will supervise the activities of Ice & Refrigeration sales specialists in major cities throughout the country.

Active in the air conditioning and refrigeration field for 26 years, Maseritz headed up several large air conditioning and refrigeration distributorships and is former wholesale manager of York Distributors, Inc., the York distributor on Long Island.

Strike Threat Halts Hotel's Refrigeration Service Pact

LOS ANGELES — Operating engineers made a strike threat to their employer, the Beverly Hilton hotel, and caused the employer to withdraw negotiations with a refrigeration contractor for servicing and repair, including 24-hour emergency service work.

Before negotiations were broken off, Henry B. Ely, executive secretary of Refrigeration & Air Conditioning Contractors Association of Southern California, had an exchange of telegrams with Peter T. Schoemann, general president of the U. A., asking him to obtain assurance from head of the Operating Engineers that the contract might be properly consummated with the hotel.

This Schoemann refused to do, saying assurance must come from the Operating Engineers and U. A. has nothing to do with furnishing it.

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Western Show Scheduled--

(Concluded from Page 1, Col. 3) five days scheduled for the event will be restricted to those connected with the industry and the remaining two days will be open to the general public specifically interested in the type of equipment on display for their homes or small business establishments.

ASHAE has no financial interest in the show itself.

Fred J. Tabery, well-known exhibit manager, has been named to manage this regional event which is expected to draw from the 11 western states. Tabery has announced a concentrated publicity campaign directed to every type of user of the products which will comprise the exhibit.

The announcement was made at a meeting at the Shrine Exposition Hall in Los Angeles where the show will be held, at-

tended by the executive committee of the program and a large number of representatives from the industry covered by the exhibit.

Members of the Executive Committee other than Hess are: Robert Savage, Water Chemists, Inc., vice president, American Society of Refrigerating Engineers, Los Angeles; R. E. Harkens, managing director, Institute of Heating & Air Conditioning Industries; Henry C. Ulovec, Mehling & Hanson, chairman, southern California ASHAE; Robert Warden, Guy L. Warden & Sons, president, National Association of Power Engineers of Southern California.

Donald E. Dutton, Prentiss Corp., president, Los Angeles Chapter, Refrigeration Service Engineers Society; Peter H. Askew, Thermal Products, Inc., chairman, Refrigeration Wholesalers Association; George Hatch, National Heater Co.; Horace Allison, chairman, Mechanical Contractors of Southern California; W. W. Allison, past president, Refrigeration Service Engineers Society.

El Nelson, Union Ice Co., chairman, Entertainment Committee, National Association of Practical Refrigerating Engineers, California, Chapter 2; Richard Farr, Farr & Co.; William P. Tennity, Tennity & Co.; D. E. Reznick, Airfan Engineering Co.



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Emerson Electric--

(Concluded from Page 1, Col. 5) tive assistant to the manager of Emerson Electric's Special Products Div., will direct the sale of room air conditioners. He succeeds Childers as manager of air conditioning sales.

Under the reorganization plan, Howard Sample will continue as manager of industrial fan sales and John Wright will continue as manager of commercial fan sales.

Childers joined Emerson Electric in March, 1954, as chief refrigeration engineer. He became air conditioning-sales manager in December of that year. He formerly was a design engineer for York Corp.

Handlan joined Emerson Electric in January, 1954, as a project engineer. He was transferred to the sales department as an administrative assistant in June, 1954.

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Westinghouse Room Unit Plan--

(Concluded from Page 1, Col. 2) steady production of units before the arrival of warm weather, the company announced.

"Normally about 75% of the year's room air conditioner sales at retail are made from May through August," said H. F. Hildreth, manager of the Westinghouse refrigeration specialties division which produces room air conditioners for the firm. "In the past this has created a heavy demand for product in that four-month period, causing stepped up production followed by drastic curtailments later."

Hildreth said the plan would develop a more steady and orderly demand from dealers for the company's room air conditioners. This would steady production and employment and would eliminate the effects of

concentrated seasonal sales, it was pointed out.

"It has been particularly true in the room air conditioner business that a cool summer frustrates sales, leaving the dealer with a high inventory of unsold units," he explained. "Consequently, dealers have become a bit 'gun-shy' about buying ahead of the selling season. To offset this, we are taking the dealer's inventory risk, assuring him it will be liquidated either by sales or by factory repurchase."

At the same time, Hildreth pledged the company to a "line stabilization policy."

"Although we pledge that we will keep dealers competitive with new product developments, we will not deliberately make more changes in model designation or slight styling alterations in order to obsolete existing in-

ventory," he said. "We will always work toward line stability. Models will be added and models dropped, but with ample notice to distributors so that they and their dealers can clear existing stocks," he commented further.

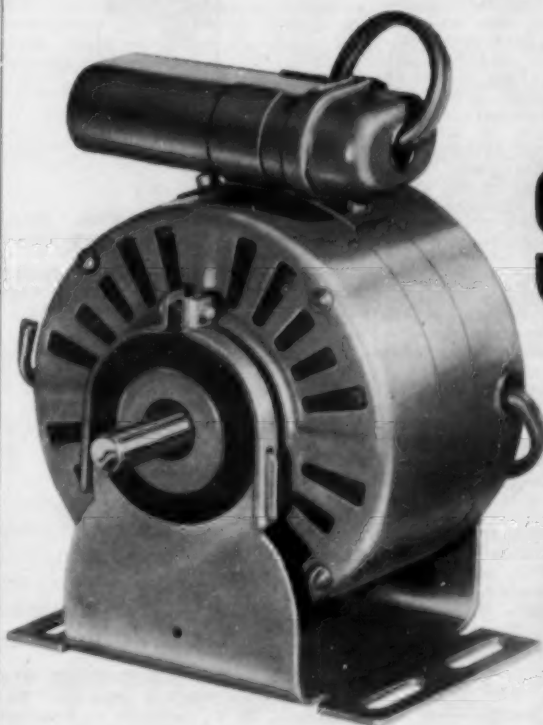
Hildreth stated that from early field and industry reports, room air conditioner sales could conceivably hit the 2,000,000 mark in 1957.

Westinghouse Prices--

(Concluded from Page 1, Col. 2) tributor cost sheet showing suggested list prices for guidance only. It will be the responsibility of the distributor to suggest list prices for his market."

Hildreth stated that the company would pursue a policy of keeping distributor costs in line with major competition and charge the distributor with a similar responsibility on the subject.

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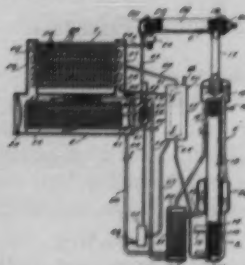


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PATENTS

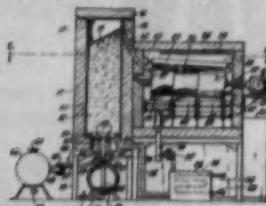
Week of June 26
(Concluded)

**2,751,759. ABSORPTION REFRIG-
ERATION.** Eugene F. Whitlow, Evans-
ville, Ind., assignor to Servel, Inc.,
New York, N. Y., a corporation of
Delaware. Application July 29, 1954,
Serial No. 446,589. 5 Claims. (Cl.
62-119.)



1. In a vacuum type absorption refrigeration system in which non-condensable gases are apt to occur that interfere with the proper operation of the system, a concentration control vessel connected in the system to receive and store unevaporated liquid refrigerant out of solution, a gas storage vessel enclosing the concentration control vessel, and a purging device for withdrawing non-condensable gases from one part of the system and transferring them to the storage vessel to provide a low pressure gas barrier between the concentration control vessel and atmospheric ambient.

2,751,760. METHOD OF FREEZING MATERIALS. Ralph F. Colton, Chicago, Ill., assignor to Proctor Drying and Freezing Corp., Philadelphia, Pa., a corporation of Illinois. Application August 8, 1955, Serial No. 303,326. 4 Claims. (Cl. 62-173.)



1. The method of freezing material by direct contact with a frigid liquid with which the material is immiscible and in a limited space which comprises the steps of feeding the material into a column of frigid liquid having a specific gravity at the normal operating temperature of the frigid liquid which differs from that of the material by a pre-selected amount between three percent and ten percent of the specific gravity of the frigid liquid, allowing the material to move through the frigid liquid by virtue of the aforesaid difference of specific gravity until the material is frozen, and then separating the frozen material from the frigid liquid, said frigid liquid being constituted of trifluorotrchloroethylene and normal heptane mixed in proportions to provide the specified specific gravity.

2,752,194. EVAPORATIVE CONDENSER. Jay C. Hofmeyer, Los Angeles, Calif. Application May 15, 1953, Serial No. 356,361. 11 Claims. (Cl. 357-37.)

1. An evaporative condenser comprising a rectangular casing having vertically directed front and rear walls, the casing terminating at the bottom thereof in a sump pan, conduits horizontally mounted in the upper portion of the casing for a fluid to be condensed, nozzles above said conduits for directing sprays of water downwardly

over the conduits and into the sump pan, a downwardly inclined partition in the casing, said partition having its upper edge fastened to the front wall of the casing and extending rearwardly



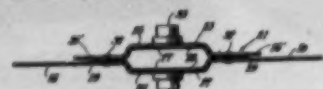
below the water level in the sump pan to form a water-tight seal between the spaces in the casing behind and in front of the partition, and overflow preventing devices in the pan in front of the partition, there being an opening in the front wall below said partition affording access to said overflow preventing devices at all times.

2,752,128. HEAT EXCHANGE STRUCTURE. Lewis Joseph Dedo, Racine, Wis., assignor to Modine Mfg. Co., Racine, Wis., a corporation of Wisconsin. Application Oct. 17, 1955, Serial No. 540,537. 7 Claims. (Cl. 257-246.)



1. A heat exchange structure for operatively mounting within a fluid passage so as to permit said fluid to flow through the heat exchange structure and therearound, said heat exchange structure comprising a pair of cooperable tubular members, one positioned in the other and forming a fluid passage therebetween, means for closing the ends of the passage so formed providing a passage for the fluid there-through, an intermediate turbulator structure interposed between said tubular members, and extending across said fluid passage in heat transfer engagement with the adjacent side walls of said tubular members, said intermediate structure being formed from sheet material which is slit along groups of parallel co-extensive lines with such groups being arranged on parallel axes and corresponding lines of different groups being aligned, the material between adjacent slits of a group being disposed out of the plane of the sheet material alternately at opposite sides thereof and corresponding portions of adjacent groups being alternately disposed at opposite sides of the sheet material providing parallel extending and undulating substantially U-shaped strip fins affixed together intermediate the slits of the contiguous groups, said turbulator structure being bent intermediate said groups to impart a shape to the structure corresponding to the shape of said passageway, and means associated with the outer member adapted to operatively connect said passageway in a fluid line and form supporting means for the heat exchange structure.

2,752,129. CONVECTOR OR OTHER HEAT EXCHANGE DEVICE. Arthur H. Modine, Racine, Wis., assignor to Modine Mfg. Co., Racine, Wis., a corporation of Wisconsin. Application Jan. 13, 1951, Serial No. 205,860. 3 Claims. (Cl. 257-256.)



1. In a finned fluid conduit for use in a heat transfer structure, the combination of an outer housing structure formed from ferrous sheet material and comprising a pair of longitudinally extending sections, one of which is provided with a longitudinally extending offset portion therein, an inner

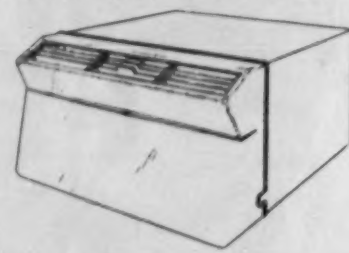
separate liner structure formed from non-ferrous sheet material and comprising a pair of sections complementary to the interior surfaces of the housing sections, said housing sections having continuously extending, peripheral mating flanges, one of said pair of mating flanges of lesser width, said liner sections having similar continuously extending, complementary mating flanges positioned between corresponding mating flanges of the housing section and forming a fluid conduit when affixed together in fluid-tight relationship and also providing substantially simulated tapered fins, means for securing together in fluid-tight relationship mating flanges of the liner sections and the latter to adjacent flanges of the housing sections to form a closed chamber, said means for securing comprising a welded connection between the flanges of the liner and housing sections, said housing and liner structures each having a pair of longitudinally spaced and aligned openings therein, the openings in the separate liner structure being axially aligned with the openings of the housing structure, said openings communicating with said chamber and forming inlet and outlet ports therefor, and separate sleeve connections positioned in their respective openings and secured in fluid-tight relationship to said liner structure, and said separate sleeve connections extending normally outwardly with respect to the longitudinally extending sections of the finned fluid conduit.

DESIGNS

175,149. COMBINATION FREEZER AND REFRIGERATOR CABINET OR SIMILAR ARTICLE. Jean O. Reinecke, Oak Park, Ill., assignor to Amana Refrigeration, Inc., Amana, Iowa, a corporation of Iowa. Application Sept. 6, 1955, Serial No. 37,801. Term of patent 14 years. (Cl. D67-3.)

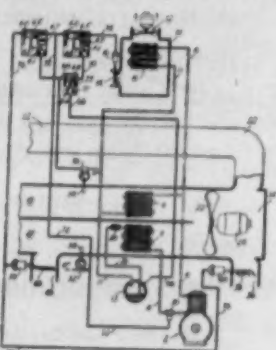


175,155. ROOM COOLERS. Frank D. Stevens, Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y., a corporation of Delaware. Application June 1, 1955, Serial No. 36,331. Term of patent 3 1/2 years. (Cl. D62-4.)



Week of July 3

2,752,759. AIR CONDITIONING SYSTEM. Joseph Mahlon Sperel, East Northport, N. Y., assignor to Buensod-Stacey, Inc., New York, N. Y., a corporation of Delaware. Application May 17, 1954, Serial No. 385,407. 14 Claims. (Cl. 62-6.)



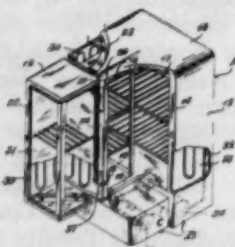
1. In an air conditioning system, the combination of, a dual duct air distribution system for supplying separate streams of warm and cold air to the conditioned space, a refrigeration system including a condenser to heat air to provide the stream of warm air and an evaporator to cool air to provide the stream of cold air and also having an auxiliary condenser to dissipate excess heat, and an automatically operating control system to maintain predetermined temperature conditions for the warm and cold air and to control the operation of said refrigeration system and the dissipation of heat by said auxiliary condenser including means responsive to predetermined low temperatures of the streams of cold air and warm air to restrict the dissipation of heat by said auxiliary condenser.

2,752,760. EXPANSION VALVE WITH BULB CONTROL. Daniel L. Kaufman, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application June 4, 1954, Serial No. 434,525. 3 Claims. (Cl. 62-8.)



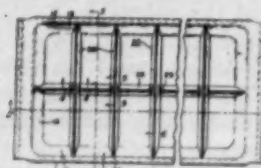
1. Refrigerating apparatus including a refrigerant circuit containing a compressor and a condenser and an evaporator, means for operating the compressor, a thermostatic expansion valve connected in said circuit between the condenser and evaporator, said valve having a fluid motor, a thermostat bulb in heat exchange relation with said circuit adjacent the outlet of said evaporator, conduit means connecting said bulb and said fluid motor, and pressure responsive valve connected in series with said conduit means and responsive to a predetermined pressure in said bulb for shutting off any flow of fluid in said conduit means.

2,752,761. REFRIGERATING APPLIANCE. Donald A. Lewis, Jr., Parma, Ohio. Application Dec. 16, 1954, Serial No. 475,797. 9 Claims. (Cl. 62-89.)



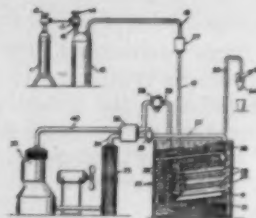
3. In a refrigerating appliance, an enclosure having an opening in its front surface, left and right movable, generally box-like structures, having a height approximately equal to the height of said opening and a width approximately equal to one-half of the width of said opening, said movable, generally box-like structures being adapted to close said opening of said enclosure when positioned side by side in front of said opening, and vertical hinge means positioned centrally and forwardly of said opening of said enclosure a distance approximately equal to the depth of said movable, generally box-like structures, said hinge means supporting said movable structures for individual horizontal movement relative to said enclosure through an angle of 180° approximately from their respective positions closing said opening to respective positions, permitting access to the respective movable structure and to the adjacent portion of said enclosure, refrigerating mechanism attached to said enclosure, a cooling coil mounted in one of said movable, generally box-like structures, and means connecting said cooling coil with said refrigerating mechanism.

2,752,782. FREEZING DEVICE. Richard S. Gaugler, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application June 24, 1954, Serial No. 438,897. 6 Claims. (Cl. 62-108.5.)



1. A unitary freezing device comprising an elongated tray capable of being twisted throughout the length thereof, a plurality of spaced apart rigid walls in said tray extending continuously thereacross and dividing the interior thereof into compartments in which water is to be frozen into ice blocks, the ends of said walls having ear-like projections at their top loosely inserted into recesses provided in opposed upright sides of said tray adjacent the upper extremity thereof, the loose attaching points of said walls to said tray forming the sole means of locking said rigid walls in the tray against removal therefrom, and said attaching points along one side of said tray being shiftable with respect to the attaching points along the opposite side of said tray in response to twisting the tray for bodily moving said rigid walls about their loose attaching points relative to said tray while positioned therein to free ice blocks from their compartments.

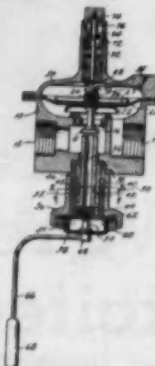
2,752,763. BEVERAGE COOLING APPARATUS. Orlando J. Shepard, Muskegon, Mich., assignor to Glascock Brothers Mfg. Co., Muskegon, Ind., a cor-



poration of Indiana. Application April 5, 1954, Serial No. 426,912. 9 Claims. (Cl. 61-141.)

1. Apparatus for dispensing a beverage having a freezing point lower than the freezing point of water comprising means for supplying carbonated beverage under pressure, a vat containing water, a beverage cooling tube in the form of a coil immersed in the water in said vat with the exterior of the tube in direct contact with the water in said vat, said tube being connected at one end to said beverage supplying means and at the other end to a dispensing valve, refrigeration means including a compressor for a volatile refrigerant, an evaporator and fluid connections between said evaporator and said compressor, said evaporator comprising a tube in the form of a coil immersed in the water in said vat with the exterior of the tube in direct contact with the water in said vat and having the turns thereof concentric with, alternating with, and adjacent the turns of said beverage cooling tube, a plurality of fins extending transversely to the axes of the beverage cooling tube and the evaporator tube, said fins being directly in contact and in heat exchange relation with both said tubes and with the water in said vat, said fins providing metallic paths for the flow of heat between said tubes and between said tubes and the water in the vat, and an expansion valve in the connection leading from the compressor to the evaporator for controlling the evaporation of the refrigerant in said refrigerant tube to maintain the temperature of said tube above the freezing point of the beverage in the beverage tube.

2,752,930. AUTOMATIC SHUT-OFF FOR VALVES AND THE LIKE. Roy J. Stouder, Goshen, Ind., assignor to Penn Controls, Inc., Goshen, Ind., a corporation of Indiana. Application Dec. 10, 1953, Serial No. 397,304. 3 Claims. (Cl. 137-80.)



1. In an automatic shut-off for regulator valves and the like, a shut-off unit adapted to be attached to the body of a regulator valve in position opposite the valve plug thereof, said unit comprising a body, a shut-off element projectable from said unit body to engage the valve plug and seat the same on its valve seat, a spring within said unit body tending to cause such projection, means to normally retain said shut-off element against the bias of said spring comprising a first sleeve having a series of radial openings therein, said first sleeve being stationarily mounted in said unit body and an axially movable sleeve, said shut-off element and said axially movable sleeve being grooved to selectively receive said balls, automatic means to move said axially movable sleeve to a position to receive the balls thereby releasing said shut-off element to permit said spring to function, condition responsive means carried on said shut-off unit body to operate said automatic means, and manual means to move said shut-off element and thereby reset it by reengagement of said balls in the groove of said shut-off element.

2,752,931. AUTOMATIC SHUT-OFF FOR REGULATOR VALVES AND THE LIKE. Wayne H. Schutmaat, Dunlap, Ind., assignor to Penn Controls, Inc., Goshen, Ind., a corporation of Indiana. Application Aug. 31, 1953, Serial No. 377,382. 7 Claims. (Cl. 137-80.)

1. In a device of the class described, a shut-off unit for a valve comprising a body, a shut-off element projectable from said body, means within said body biasing said shut-off element to shut-off position, automatic means to normally retain said shut-off element against the bias of said biasing means comprising a magnet and an armature, which when in engagement overcome the bias of said biasing means, a condition responsive means to operate said automatic means, and means to indicate when said shut-off element has

(Concluded on next page)

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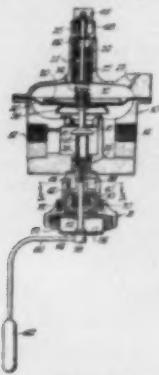
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PATENTS

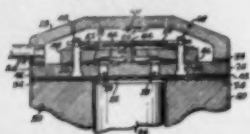
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operated comprising said body having an upwardly opening groove surrounding said magnet, a ferrous ring in said groove, said groove being positioned to



wholly receive said ring when the armature is against the magnet and to permit the change in magnetic flux when the armature is spaced from the magnet to raise the ring against the action of gravity and retain it in an elevated position with the upper edge thereof appearing above said groove.

2,752,943. REFRIGERATING APPARATUS. Ralph W. Doeg, Detroit, Mich., assignor to American Motors Corp., a corporation of Maryland. Application Sept. 15, 1952, Serial No. 309,610. 4 Claims. (Cl. 137-512.15.)



1. In a compressor, a body having a pair of laterally positioned ports, a thin resilient closure strip overlying and controlling said ports and flexible away from said ports by pressure of fluid discharging therefrom, said closure strip having its opposite ends free to slide on said body to effect flexing of said resilient closure strip, means guiding sliding movement of said closure strip, convex surface stop means for said closure strip overlying only outer end portions thereof and disposed on the other side of said resilient closure strip from said body, and spring means opposing movement of said resilient closure strip at a point intermediate said ports for all fluid pressures below a predetermined pressure.

2,752,950. CONNECTION MEANS FOR HEATING AND VENTILATING DUCTS. Thomas Carey Coulter, Cuyahoga Falls, Ohio. Original application Sept. 8, 1950, Serial No. 183,963, now Patent No. 2,709,454, dated May 31, 1955. Divided and this application May 12, 1953, Serial No. 354,491. 2 Claims. (Cl. 138-25.)



1. Sheet metal ducts for air and the like and including in combination, a pair of ducts having a quadrangular shape in cross section and positioned in end to end relation, each duct having a pair of opposed channel-shaped portions and a pair of opposed flat portions to complete each duct, the edges of the channel-shaped portions receiving and being secured to the edges of the opposed flat portions and with corresponding portions of the ducts being aligned with each other, said channel-shaped portions in said ducts having projecting flat tongues on the ends thereof positioned in overlapping relation, flattened S-shaped connectors receiving and sealing the overlapping tongues together, said flat portions of said ducts each having a turned back edge on the ends thereof transversely aligned in the ducts with said connectors and with corresponding turned back edges on the pair of ducts being adjacent each other, and flattened C-shaped cleats engaging the adjacent turned back edges on said ducts and sealing together the adjacent edges of the two opposed flat portions on said ducts, each cleat having an extension on each end folded down and extending over the ends of the connectors to cover and substantially seal the corners of said ducts between the cleats and the connectors in the space provided by the flanges on said channels.

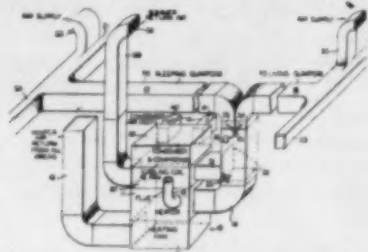
2,753,157. ECONOMY AIR CONDITIONING SYSTEM FOR BUILDINGS. James L. Hoyer, Washington, D. C. Application Dec. 12, 1952, Serial No. 235,643. 3 Claims. (Cl. 237-3.)

1. An economy air conditioning system for a building having a plurality of areas only one of which is normally used at one time, said air conditioning system including a container unit having a heating zone, a heating means, a heating means air duct air

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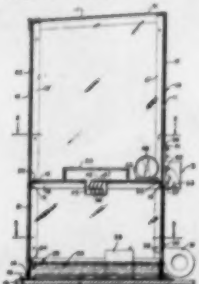
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supply means, a heating means air return means and a heating blower for circulating heating air from said heating means through said air supply means and said air return means and



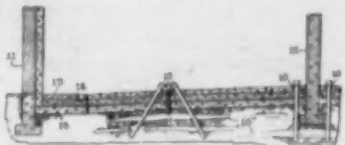
capable of providing heated air sufficient for all areas of the building, said unit having a cooling zone, a refrigeration cooling means including a blower in said cooling zone, separate from the heating blower, capable of providing cooled air sufficient for any one area at one time but too small to provide cooled air for all areas simultaneously, a branch duct from said cooling means to said heating means air duct means, said heating means air duct air supply means including a pair of separable duct means leading from said heating means to each area, damper control means for connecting all said separable duct means to said heating means and said heating blower or for selectively connecting any one of said separable duct means to said branch duct and thus to said air refrigeration cooling means and said cooling means blower, and cooled duct air return means, separate from said heating means air return means and bypassing said heating zone, leading from the boundary area between adjacent areas to said refrigeration cooling zone.

2,753,154. HUMIDITY CHAMBER. Norman R. Miller, Bristol, Conn., assignor to the United States of America as represented by the Secretary of the Navy. Application Oct. 31, 1952, Serial No. 318,145. 2 Claims. (Cl. 261-15.) (Granted under Title 35, U. S. Code (1952), sec. 266.)



1. In a device for testing electronic equipment, in combination, a casing, a partition arranged within and secured to said casing and forming an air conditioning chamber and a test chamber, said air conditioning chamber having a quantity of water therein and said partition having a centrally disposed passage formed therein, blower means secured exteriorly on said casing for forcing air at room temperature into said air conditioning chamber, spray means arranged within the air conditioning chamber for supplying moisture to the air and conditioning the air during a testing operation, means including a heater disposed within said water for controlling the temperature of the water, a tubular element arranged vertically within said conditioning chamber and secured to said partition in alignment with said passage, a plurality of baffles arranged within and secured to said tubular element in mutual spaced relation, a pair of inclined portions on each of said baffles and disposed in a plane substantially at a right angle with respect to each other, a pair of outwardly extending flange elements formed on each of said baffles for collecting a substantial amount of moisture from the conditioned air as the air is forced between the baffles through said passage and into said test chamber by said blower means, said inclined portions being adapted to divert the moisture collected by said flange elements into said conditioning chamber, port means on said casing in communication with said test chamber through which said conditioned air is exhausted, and a rack member disposed within said test chamber and supported on said partition above and in alignment with said passage and baffles for supporting said equipment and for preventing the moisture in the conditioned air forced into the test chamber from directly impinging on the equipment during a testing operation.

2,753,431. APPARATUS FOR LOWERING ICE-BUCKLED COLD ROOM FLOORS. Alonzo W. Ruff, assignor to V. C. Patterson & Associates, Inc., York, Pa., a corporation of Pennsylvania. Original application April 2, 1954, Serial No. 420,567. Divided and this application Dec. 3, 1954, Serial No. 474,460. 4 Claims. (Cl. 219-19.)



1. In combination with a cold storage warehouse having an earth-laid floor, means for supplying heat to the subjacent earth comprising: a plurality of sheathed electrical heating units disposed at horizontally spaced points in the subjacent earth and positioned to extend upwardly through said floor; means electrically connected to each of said units and extending through said floor to afford connection of said units to a source of electrical energy; and switch means electrically connected to said first mentioned means affording selective connection of one or more of said units to a source of electrical energy.

DESIGNS

178,214. REFRIGERATOR CABINET. William R. Steiner, Detroit, Mich., assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application Nov. 23, 1955, Serial No. 39,020. Term of patent 3 1/2 years. (Cl. D67-3.)



Trane Joins Group

GREENBRIER, W. Va.—The Trane Co., La Crosse, Wis., and its wholly-owned subsidiary, Trane Co. of Canada, Ltd., Toronto, Ont., were elected to membership in the Air Moving & Conditioning Association at the association's annual meeting here.

SALESMEN

SPEND YOUR WINTER IN FLORIDA AND MAKE MONEY AT THE SAME TIME

Also, make \$10,000 to \$12,000 a year proven figures.

• Have you ever sold automatic ice machines, soft drink dispensers, also, commercial refrigeration equipment? Retail.

• Have you had at least five years experience?

• Are you past 40 years of age?

Can you prove the above and give satisfactory character references?

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• Our employees know of this advertisement.

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Waters Equipment Co., Inc.
Attention: Ivan L. DeBray
P. O. Box 2947
Tampa, Florida

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

SALES ENGINEER—with five years' successful sales, service and management experience in controls industry. Seeking improvement. Good refrigeration, heating and air conditioning background. Have maintained excellent contacts with OEM, wholesalers and dealer missionary work. Age 30 and family man. Prefer Philadelphia territory. BOX A5694, Air Conditioning & Refrigeration News.

SERVICE REPRESENTATIVE in heat pumps or refrigeration field. Six years' commercial and low temp refrigeration experience. Previous experience in related fields. Have operated own shop four years. I am 28 years old, have family responsibilities and live in St. Louis County. Can furnish references. May consider some travel. BOX A5696, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

SALES ENGINEER—Experienced in refrigeration to fill vacancy in a large and progressive Chicago wholesaler organization. Draw against commission. Profit sharing and insurance. Write or call Harry G. Johnson, Sales Manager, FRED C. KRAMER COMPANY, 128 S. Paulina, Chicago 12, Illinois.

WANTED in Southern California competent refrigeration and air conditioning engineers, draftsmen and refrigeration fitters. Due to serious labor shortage the Refrigeration and Air Conditioning Contractors Association of Southern California has undertaken the responsibility of recruiting employees for members of the Association. Upon your inquiry setting forth general type of work we will forward to you an appropriate questionnaire. **REFRIGERATION AND AIR CONDITIONING CONTRACTORS ASSOCIATION OF SOUTHERN CALIFORNIA, INC.**, 453 South Spring Street, Los Angeles 13, California.

YOUNG MAN wanted to work in engineering department of air conditioning and refrigeration contractor in Philadelphia. Mechanical background desirable with some drafting experience. Opportunity for advancement in engineering or sales. Call MR. REEHM, Walnut 2-2462 for interview.

ESTABLISHED MANUFACTURERS' representative calling on refrigeration men, to sell complete line of commercial refrigeration in Michigan and Indiana. **THE C. SCHMIDT COMPANY**, 1712 John Street, Cincinnati 14, Ohio.

SALES REPRESENTATIVE wanted to participate in building an expanded program for a newly enlarged and complete line of packaged equipment built by Westinghouse for the rapidly growing field of residential and commercial heating and air conditioning. Experience and an understanding of dealership problems essential. This is an opportunity for the right man with a distributorship backed by 23 years of experience representing Westinghouse Air Conditioning in Metropolitan Detroit area. Write **TEMP-MATIC WHOLESALERS, INC.**, 12300 Hamilton Ave., Detroit.

MANUFACTURERS' REPRESENTATIVES: Opportunity for association with a firm manufacturing quality products since 1945. We have territories available for men experienced in selling control plant conditioners, multi-zone conditioners and coils. Write **THERMAL ENGINEERING CORPORATION**, P. O. Box 13254, Houston 19, Texas.

SALES REPRESENTATIVE wanted, age no barrier, for sale of new development in the air conditioning field to jobbers. This new product is one of the three major components of the refrigeration cycle and will completely change existing conventional field practice. It is extremely saleable and will reward a hard-hitting individual with above average earnings on a liberal commission basis. Exclusive protected territories. Previous experience in air conditioning, refrigeration, plumbing, or heating industries desirable but not

essential. Engineering background helpful. The company offering this product is now the leading manufacturer of one of the three major components of the refrigeration system. Write now, giving us personal details as well as present activity to BOX A5659, Air Conditioning & Refrigeration News.

WANTED—Two district sales supervisors: one to be located in San Francisco and one in the South to supervise sales offices of manufacturer of heating and air conditioning equipment on West Coast and Southern areas. Send complete information of education, experience and salary requirements to BOX A5651, Air Conditioning & Refrigeration News.

LEADING WHOLESALER of refrigeration and air conditioning equipment has opening for salesman in Brooklyn and Long Island territory. Experienced. Must have knowledge of estimating air conditioning and refrigeration loads. Salary, expenses and bonus. Write BOX A5682, Air Conditioning & Refrigeration News.

WANTED REFRIGERATION specialty salesman for eastern territory. Midwest manufacturer producing established line of refrigeration equipment needs salesman to locate in Philadelphia area. Knowledge of refrigeration helpful. Send complete resume, stating salary expected, to: BOX A5692, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WANTED 50 used window air conditioners by used equipment dealer in Tennessee. No smaller than 1/2 ton, preferably 3/4 and 1 ton units. Write, giving brand names, size, condition, age, and price, to BOX A5695, Air Conditioning & Refrigeration News. Will reply promptly.

EQUIPMENT FOR SALE

CUT COOLING costs—Self-closing doors mounted just inside your cooler will keep the cold inside during loading or unloading when it is advantageous to prop the door open. We have in stock prominent brand 36" x 66" genuine Jamison type double batten auto-close doors complete with removable track heads for 72" track. 1 1/2" corkboard insulation, 14-gauge metal clad. Brand new. Original factory crates. \$98.00 each. Freight prepaid in United States. Door height will be altered for anything up to 112" track for \$15.00 additional. **BIMEL COMPANY**, Cincinnati, Ohio.

NOW AT your local wholesaler guaranteed 20 foot lift new Kesco King Size 1957 automatic condensate water disposal pumps. 3 inches water in tank starts pump. Designed for air conditioners, ice cube bins, drinking fountains. Wholesalers, for 1957 literature, write to **KESCO PRODUCTS CORP.**, Box 84, Springfield Gardens 13, New York.

BUSINESS OPPORTUNITIES

WANTED: RELIABLE and capable distributors for our air conditioning and refrigerating equipment. Good territories available. Full line of compressors, condensers, coils, coolers, controls, valves and fittings, pressure vessels, etc. Contracts include repairs and spare parts for equipment now in use. Profitable account. Address Department R, **FRICK COMPANY**, Waynesboro, Pennsylvania. Refrigeration Engineering Pioneers since 1882.

FOR SALE: Old established heating, air conditioning and commercial refrigeration dealer in prosperous west Texas city. Equipment and merchandise \$15,000.00. BOX A5691, Air Conditioning & Refrigeration News.

AVAILABLE THROUGH purchase or merger. Established air conditioning and heating wholesaling firm. Annual sales one-half million. Located major city in Southern California. Transfer of franchises contingent upon acceptance by manufacturers based upon trade reputation, financial strength. Principals only. BOX A5693, Air Conditioning & Refrigeration News.

MISCELLANEOUS

ATTENTION SERVICEMEN: Send for free circulars and bulletins on refrigeration parts and equipment. Real money saving values: **WALTER W. STARR**; 2833 Lincoln Avenue, Chicago 13, Illinois.

Compressors -- Excise Tax Hearings --

(Concluded from Page 1, Col. 5)

tioning. A comparative figure for the same period of 1955 is not available, but total 1955 shipments amounted to 255,371 units.

Figures for compressor bodies, broken down by categories, together with the names of reporting companies, follow:

MANUFACTURERS' SHIPMENTS OF COMPRESSOR BODIES PRODUCED BY REPORTING COMPANIES

(Except for household refrigerators)

Horsepower*	Shipments Including Exports	
	Aug., 1956	Jan.-Aug., 1956
1/4 & under	54,952	408,735
1/4	54,333	584,448
3/4	20,258	232,547
1	33,432	342,555
1 1/4	40,038	614,026
2	78,628	593,954
2 1/4	24,767	253,829
3	4,140	59,484
4	5,072	92,235
5	5,022	72,762
6	2,356	32,689
7 1/4	823	7,412
10	276	2,781
15	245	2,100
20	165	1,426
25	576	5,043
30 & over		
Total	325,083	3,906,035

For Ammonia Refrigerant—Total 197 1,418

For Automotive Air Conditioning—Total 11,654 205,710

Grand Total 336,934 3,513,163

*For all refrigerants except ammonia (excluding units for automotive air conditioning).

Reporting companies: Airtemp Div., Chrysler Corp.; Brunner Mfg. Co.; Carrier Corp.; Copeland Refrigeration Corp.; Curtis Mfg. Co.; Refrigeration Div.; Frick Co., Inc.; Frigidaire Div.; General Motors Corp.; General Electric Co.; Kelvinator Div.; American Motors Corp.; Lehigh, Inc.; Servel, Inc.; Tecumseh Products Co.; Trane Co.; Vilter Mfg. Co.; Westinghouse Electric Corp.; Worthington Corp.; York Corp., subsidiary of Borg-Warner Corp.

This summary includes all compressor bodies shipped by the reporting companies regardless of whether they were shipped separately or incorporated into a condensing unit or unitary end-use product (such as a room air conditioner, display case, freezer, or commercial refrigerator). Shipments for export are included. Shipments for household refrigerators are not included.

In order to avoid duplication of reporting, shipment figures were requested only from companies that assembled the machined compressor casting with the components necessary to make a complete compressor or motor-compressor assembly.

Sutton Auto Unit --

(Concluded from Page 1, Col. 2)

air conditioner, which hangs under the dashboard of a car, will be delivered to Ford and by the auto maker to its dealers starting in February, it was disclosed. The unit will be installed by dealers and not in the factory. Quantities to be made will depend on demand generated for the new product, it was explained.

Sutton declined to disclose its price for the unit, but Ford officials said it will sell for less than the "Selectaire" system now used in Ford cars.

Suggested list price for the Selectaire is \$412.50 plus a \$50 installation charge. Actual price of the Vornado unit has not yet been determined, a Ford spokesman said.

The new Hang-On system is described as simpler than the Selectaire and Ford officials reported it does not embody a heater unit as does the present air conditioner, components of which are built by suppliers and assembled into a single kit by Ford Div. for shipment to installing dealers.

(Concluded from Page 1, Col. 2)

At the opening session, Rowland Jones, Jr., ARF president, told the subcommittee on excise taxes, headed by Rep. Forand (D., R. I.), that these excises are a "tribute which cuts purchasing power by raising the retail price."

Later, the National Association of Manufacturers renewed its proposal for a flat, across-the-board excise tax rate on most products. The NAM contended that the present "selective and discriminatory" excise system undermines taxpayers' respect for the Government."

Under the NAM proposal, outlined by Charles R. Sligh, Jr., chairman of its executive committee, a uniform percentage tax of the consumer price would be levied on the manufacturer who would in turn pass the tax on to the consumer.

Another group, the National Federation of Independent Business, told the subcommittee it favored a general cutback in all excise taxes. A spokesman also argued that present collection methods "glaringly favor giant business at the expense of the small business competitor."

At the opening session, the subcommittee heard recommendations by an Internal Revenue Service study group. One of these was that the miscellaneous excises should be regarded as a permanent part of the Federal tax structure rather than temporary levies enacted to raise emergency revenues.

Another highlight of the initial hearings was a statement by Dan T. Smith, special assistant to Treasury Secretary Humphrey, that the Treasury believes that when substantial tax cuts are possible, reduction

in individual income taxes must have "high priority."

Another House Ways and Means subcommittee headed by Rep. Mills (D., Ark.), which is studying technical tax problems outside the excise field, heard industry witnesses urge action to ease the tax treatment of pre-paid income and reserves for future expenditures.

The Forand subcommittee has previously held hearings on proposals for technical excise tax changes. A bill to carry out the subcommittee's recommendations in this field was introduced during the past session of Congress and the subcommittee was then reconstituted to get industry views on the bill. It was also authorized to prepare recommendations on changes in excise rates.

During the two weeks of hearings, more than 100 industry spokesmen will testify. Then the subcommittee will begin preparing a new report to the

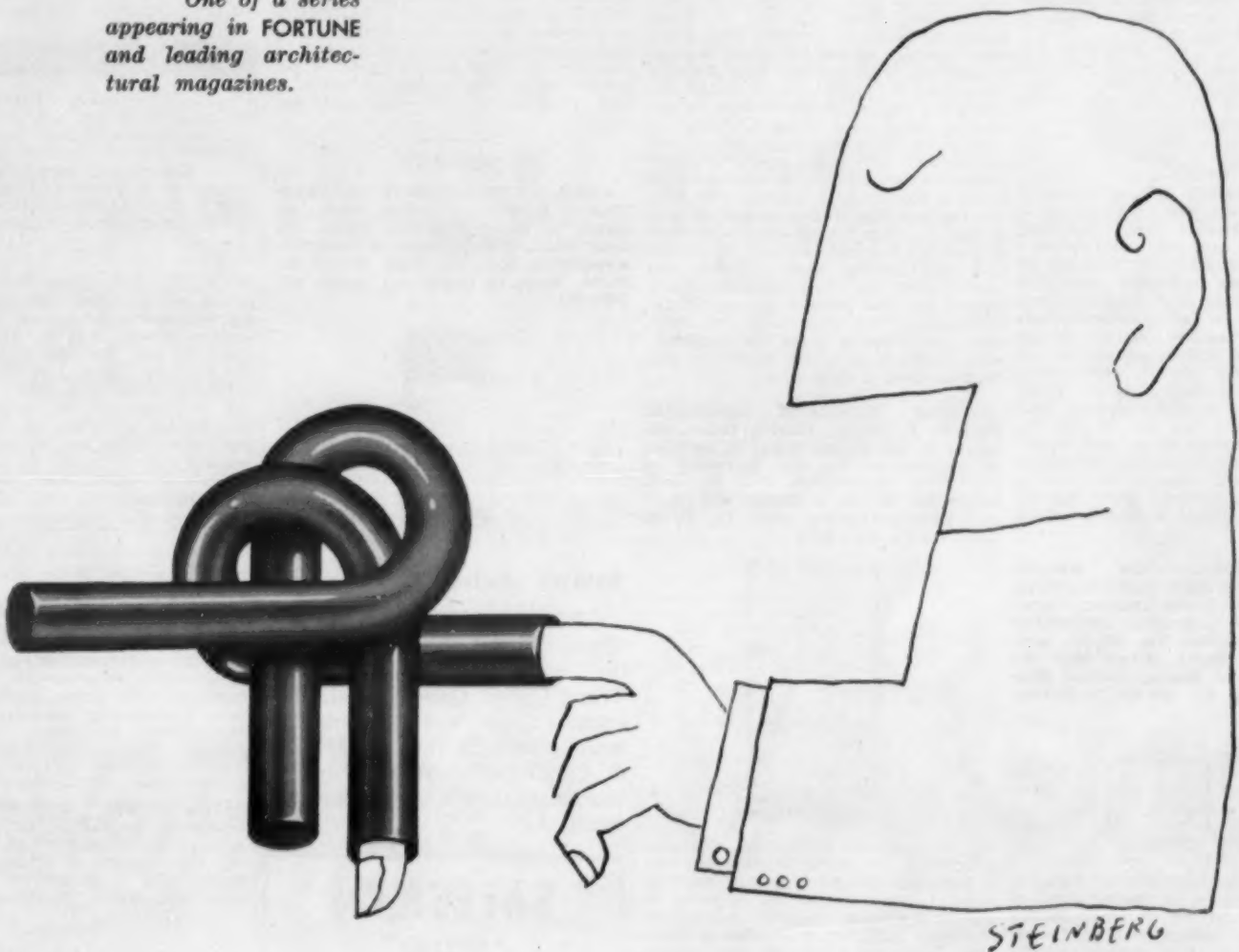
full committee for action next year.

Russell C. Harrington, Internal Revenue Service commissioner, told the subcommittee the IRS has adopted two of the subcommittee's recommendations but opposed a third.

He stated that the agency is testing the maintaining of a public record of all suits filed for excise tax relief. It has also adopted the subcommittee proposal that any excise taxpayer may have his returns examined by a full-time excise tax agent and can hold informal conferences with a full-time excise tax group supervisor when his returns are being examined.

Harrington said the IRS has decided against a proposal for a semi-independent excise tax appeals board within the Revenue Service. However, he said the agency planned to make the excise tax administrative appeals procedure uniform with the income tax procedure.

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